***Executive Budget Summary***
*Office of Nonproliferation and National Security*

In recent years, the worldwide proliferation of Weapons of Mass Destruction (WMD) and their missile delivery systems has emerged as one of the most serious dangers confronting the United States. This is a continuing and evolving problem with far-reaching consequences for international security and stability.

At least 20 countries -- some of them hostile to the United States -- already have or may be developing WMD through the acquisition of dual-use technology, indigenous development and production, and/or support from rogue supplier states.

The President has made nonproliferation one of the nation's highest priorities. Based on the unique scientific, technical, analytical, and operational capabilities of the Department and its National Laboratories, the Department of Energy (DOE), through its Office of Nonproliferation and National Security, is uniquely suited to provide leadership in national and international efforts to reduce the danger to U.S. National Security posed by Weapons of Mass Destruction (WMD). The Office of Nonproliferation and National Security accomplishes this mission by: (1) **preventing** the spread of Weapons of Mass Destruction (WMD) materials, technology, and expertise; (2) **detecting** the proliferation of WMD worldwide; (3) **reversing** the proliferation of nuclear weapons capabilities, and (4) **responding** to WMD emergencies.

In order to reduce the international proliferation threat, the Office of Nonproliferation and National Security is focusing its resources and expertise on the following near-term priorities: (1) securing nuclear materials, technology, and expertise in Russia and the Newly Independent States; (2) maintaining effective protection, control, and accountability of nuclear materials, technology, and expertise in the United States; (3) limiting weapons-usable fissile materials worldwide; (4) ensuring transparent and irreversible nuclear reductions worldwide; (5) supporting the implementation of a Comprehensive Test Ban Treaty (CTBT); (6) developing and integrating a program for preventing, detecting and responding to nuclear terrorism and smuggling; (7) controlling nuclear exports; and (8) strengthening the nuclear nonproliferation regime.

Some of our most important international activities include: conducting the government-to-government and laboratory-to-laboratory programs of cooperation between U.S. nuclear experts and their counterparts at nuclear facilities and institutes in the former Soviet Union to improve materials protection, control and accountability; assisting Russia and the Newly Independent States in establishing and enhancing nuclear material export control systems; developing technologies and systems to detect the proliferation of WMD, to monitor and verify existing treaties, as well as the CTBT; working to complete critical operations in cooperation with the Democratic Peoples Republic of Korea (DPRK) to stabilize, can, and safely store spent nuclear fuel in the DPRK in order to freeze the North Korean nuclear weapons program and to enable the application of effective IAEA safeguards; working with the private sector to engage WMD weapons scientists, engineers, and technicians in the former Soviet Union in activities which reduce the proliferation threat; and providing technical support for long-term monitoring of Iraqi facilities and other nuclear safeguards and emergency programs of the International Atomic Energy Agency (IAEA). In addition, we are providing unique and in-depth technical, arms control, intelligence, research and technology expertise as part of the U.S. Government's integrated efforts to conclude negotiations, prepare for entry into force, and

implement a CTBT. We also provide emergency management experts to assist other foreign governments in reviews of their emergency preparedness plans and capabilities. DOE continues to contribute to National Intelligence Estimates and to support the Non-Proliferation Center in assessing the activities of emerging nuclear weapons states and terrorist organizations (the demand side of the equation) and nuclear supplier states or other sources, such as theft and smuggling of nuclear materials (the supply side of the equation).

In concert with our international activities, we are responsible for wide-ranging activities to accomplish nonproliferation and national security goals in the United States. These activities include: directing a rigorous safeguards and security program for the entire Department of Energy complex, thereby ensuring the demonstrated security of our own nuclear materials, technology and expertise; declassifying millions of DOE documents while protecting critical information that has the potential to facilitate the proliferation of weapons of mass destruction; managing and improving the Department's emergency management and response capability and providing assistance to other government agencies as well as state, tribal, and local governments; and maintaining a security investigations and reinvestigations program for both Federal and contractor employees of the Department. DOE also provides technical, analytical, policy and implementation support to the efforts of the nation's policy community to deal with nonproliferation issues.

In FY 1998, the Department will achieve its nonproliferation and national security priorities by: (1) accelerating efforts to provide enhanced materials protection, control and accountability for fissile materials in Russia and the Newly Independent States; (2) cooperating with authorities in the former Soviet Union to redirect intellectual capital through the science and technology centers, the Industrial Partnering Program, and export controls; (3) enhancing efforts to detect and stem the proliferation of chemical and biological weapons and to respond to potential terrorist use of such weapons (4) concentrating efforts toward limiting the production and use of weapons-usable fissile materials in the civil sector by reducing and eventually eliminating the use of highly enriched uranium and promoting alternatives to the civil use of plutonium, expansion of the Reduced Enrichment for Research and Test Reactors (RERTR) Program, and by purchasing, where appropriate, at-risk weapons-usable nuclear materials; (5) providing necessary research, technology development, analysis, and training as part of the U.S. Government's efforts to complete and implement a CTBT; (6) developing and implementing an integrated approach to nuclear smuggling, terrorism, and emergency response; (7) confirming Russian and U.S. nuclear weapon dismantlement through mutual reciprocal inspections and other activities which enhance transparency and irreversibility; (8) strengthening the international nonproliferation regime through measures which include our efforts in North Korea, negotiation of an international fissile material cutoff convention and cooperation with and support for the IAEA safeguards programs, including the facilitation of IAEA inspections in the United States. The Department will also maintain an emergency management program for response to domestic hazards and to provide assistance internationally. Finally, in support of all of the Department's nonproliferation capabilities, we will continue to develop technologies and systems for detecting, characterizing, and monitoring proliferant activities worldwide.

Kenneth E. Baker
Acting Director
Office of Nonproliferation and
and National Security

DEPARTMENT OF ENERGY
FY 1998/FY 1999 CONGRESSIONAL BUDGET REQUEST
OTHER DEFENSE ACTIVITIES
(Tabular dollars in thousands, Narrative in whole dollars)
NONPROLIFERATION AND VERIFICATION RESEARCH AND DEVELOPMENT

## PROGRAM MISSION

The Department of Energy (DOE) Nonproliferation and Verification Research and Development Program is the only U.S. Government program dedicated to conducting applied research, development, testing, and evaluation of science and technology for strengthening the United States response to the threats to national security and to world peace posed by the proliferation of nuclear weapons and special nuclear materials. Activities center upon the development, design, and production of operational sensor systems needed for proliferation detection, treaty monitoring, nuclear warhead dismantlement initiatives, and support to intelligence activities. In FY 1998, the Department will leverage its considerable nuclear nonproliferation research and development base and resident chemical and biological sciences expertise by applying these capabilities to stem chemical and biological weapons proliferation. DOE will continue to focus and integrate existing and new research and development activities to counter nuclear smuggling and terrorism. Included for all programs is support for the timely transfer of prototyped and tested systems to operational users, especially other U.S. Government agencies. The program also supports subsequent commercialization of technologies and contributes to the Small Business Innovation Research Program.

The GOAL of the Nonproliferation and Verification Research and Development Program is to:

Enhance U. S. National Security by reducing the global danger from weapons of mass destruction through partnerships and customer-driven research and development to provide the science and technology required for treaty monitoring, material control, and early detection and characterization of the proliferation of weapons of mass destruction and special nuclear materials, in both cooperative and non-cooperative environments.

The OBJECTIVES related to this goal are:

1. Develop and demonstrate the technologies needed to detect the early stages of proliferant nations' weapons development programs.

2. Develop and demonstrate the technologies needed to detect and deter the diversion and smuggling of nuclear weapons, components, and special nuclear materials in noncooperative environments.

3. Modify and apply technologies developed for nuclear proliferation and exploit the DOE Laboratory Complex expertise in chemical and biological sciences and The Human Genome Project to address chemical and biological weapons proliferation.

4. Provide the U.S. Government with the scientific and technical capability to monitor and verify existing and future nuclear treaties using sensors and algorithms for detecting, locating, identifying, and characterizing nuclear explosions underground, underwater, in the atmosphere, and in space.

5. Develop technologies and (in conjunction with the Office of Arms Control and Nonproliferation) demonstrate technologies for: nuclear materials protection, control, and accounting; nuclear warhead dismantlement cooperative monitoring; confidence building measures; and transparency measures, in support of Office of Nonproliferation and National Security initiatives related to the IAEA, Mutual Reciprocal Inspections, and HEU purchase implementation.

6. Maintain the focused, cost-effective nonproliferation and treaty verification technology base necessary to permit response both to current customer requirements and to emerging threats.

PERFORMANCE MEASURES:

1. Ability to meet customer need dates for delivery of technologies for proliferation detection and arms control monitoring operational missions.

2. Development of new sensors/concepts which increase the national capability for early detection of the proliferation of weapons of mass destruction.

3. Development of sensors with increased sensitivity and of improved processing capability which will yield higher levels of confidence in worldwide nuclear explosion surveillance capability enabling the U.S. Government to successfully monitor a Comprehensive Test Ban Treaty (CTBT).

4. Improvement in U.S. Government and international technical capabilities to detect, deter, and interdict the diversion and trafficking of nuclear materials.

SIGNIFICANT ACCOMPLISHMENTS AND PROGRAM SHIFTS:

- Initiated a research and development program to address the threat of chemical and biological weapons proliferation. This applies the DOE expertise in chemical and biological sciences and The Human Genome project to detection, characterization, and decontamination of chemical and biological threat agents, as well as redirecting and extending existing remote chemical species detection programs that address nuclear proliferation by expanding their scope to address chemical and biological weapons signatures.

- Provided continuous worldwide monitoring for atmospheric nuclear explosions with sensors designed, developed, and produced by the Nonproliferation and Verification Research and Development Program and deployed upon the Global Positioning System satellite constellation. Continued to shift emphasis from Cold War Nuclear Explosion Detection (NUDET) mission to new emerging nuclear test threat from threshold states. Working with US Air Force, implemented a replenishment schedule to ensure future Global Positioning System payloads address new threats.

- Continued to develop improved laser remote sensors (Lidars) for remote optical detection and characterization of multiple chemical effluents related to proliferation activities. Field demonstrated airborne operations of an advanced long-range laser remote sensor. Field demonstrated operations of short-range portable lidars. Applied extensive signature experience from nuclear weapons proliferation to chemical and biological weapons proliferation signatures. Modified lidar systems that detect signatures of nuclear proliferation for use against chemical and potentially biological weapons signatures.

- Developed and field tested a passive imaging system for remote optical detection and characterization of multiple chemical effluents related to proliferation activities. Conducted experimentation and modeling to extend this capability beyond nuclear signatures to chemical and potentially biological proliferation signatures.

- Continued development of synthetic aperture radar (SAR) autofocus algorithms, sensitive change detection algorithms, and interferometric SAR (IFSAR) terrain mapping algorithms for treaty monitoring purposes, and provided the Department of Defense (DoD) with algorithms for their use in battle damage assessment and terrain elevation determination.

- Implemented third year of directed responsibility for Comprehensive Test Ban Treaty (CTBT) research and development for underground, underwater, atmospheric, and space nuclear detonation detection.

- Conducted a comparison of U.S. laboratory capabilities to strengthen interagency response to threats from diverted nuclear materials and to direct development of infield forensic technologies.

- Initiated a comprehensive research and development effort which integrates and focuses new projects with ongoing efforts to counter nuclear smuggling and terrorism. This program will be conducted in partnership with the law enforcement and intelligence communities.

## PROGRAM FUNDING PROFILE
## (Dollars in Thousands)

| Sub-program | FY 1996 Current Appropriation | FY 1997 Original Appropriation | FY 1997 Adjustments | FY 1997 Current Appropriation | FY 1998 Request | FY 1999 Projection |
|---|---|---|---|---|---|---|
| Material Detection | 59,558 | 60,962 | 0 | 60,962 | 60,493 | 76,000 |
| Treaty Monitoring | 74,066 | 81,257 | 0 | 81,257 | 81,257 | 85,000 |
| Proliferation Detection | 75,871 | 69,700 | 0 | 69,700 | 68,250 | 75,000 |
| Program Direction | 2,000 | 0 | 0 | 0 | 0 | 0 |
| Subtotal, Operations and Maintenance | 211,495 | 211,919 | 0 | 211,919 | 210,000 | 236,000 |
| Adjustment | *80,030 | 0 | 0 | 0 | 0 | 0 |
| TOTAL, Research and Development | 291,525 | 211,919 | 0 | 211,919 | 210,000 | 236,000 |

* Transfer of funds to Nuclear Energy for Russian Reactor Safety

## PROGRAM FUNDING BY SITE
## (Dollars in Thousands)

| Sub-program | FY 1996 Current Appropriation | FY 1997 Original Appropriation | FY 1997 Adjustments | FY 1997 Current Appropriation | FY 1998 Budget Request | FY 1999 Budget Projection |
|---|---|---|---|---|---|---|
| Argonne National Laboratory | 1,970 | 1,665 | 0 | 1,665 | 1,565 | 2,000 |
| Brookhaven National Laboratory | 4,920 | 1,820 | 0 | 1,820 | 1,020 | 1,500 |
| Environmental Measurements Lab | 210 | 275 | 0 | 275 | 275 | 280 |
| Idaho Operations Office | 5,409 | 5,230 | 0 | 5,230 | 5,230 | 6,000 |
| Lawrence Livermore National Laboratory | 37,242 | 38,342 | 0 | 38,342 | 38,342 | 44,340 |
| Los Alamos National Laboratory | 57,445 | 59,883 | 0 | 59,883 | 59,883 | 66,880 |
| Nevada Operations Office | 3,708 | 3,320 | 0 | 3,320 | 3,020 | 4,320 |
| Oak Ridge National Laboratory | 5,329 | 4,284 | 0 | 4,284 | 4,084 | 5,000 |
| Pacific Northwest National Laboratory | 16,430 | 15,280 | 0 | 15,280 | 15,280 | 18,480 |
| Sandia National Laboratories | 66,670 | 66,969 | 0 | 66,969 | 67,650 | 72,650 |
| Savannah River Technology Center | 1,545 | 2,050 | 0 | 2,050 | 2,000 | 2,500 |
| Non-DOE U.S. Govt. Labs. | 7,291 | 7,849 | 0 | 7,849 | 6,699 | 6,850 |
| Washington Headquarters | 3,326 | 4,952 | 0 | 4,952 | 4,952 | 5,200 |
| Subtotal | 211,495 | 211,919 | 0 | 211,919 | 210,000 | 236,000 |
| Adjustment | *80,030 | 0 | 0 | 0 | 0 | 0 |
| TOTAL, Research and Development | 291,525 | 211,919 | 0 | 211,919 | 210,000 | 236,000 |

*Transfer of funds to Nuclear Energy for Russian Reactor Safety

**NONPROLIFERATION AND VERIFICATION RESEARCH AND DEVELOPMENT**
**MATERIAL DETECTION**

I. Mission Supporting Goals and Objectives

Develop and demonstrate advanced man-portable and infield analysis technologies and concepts to support arms control and national security programs to reduce the threat of nuclear weapons and to counter the threat from all weapons of mass destruction. Material Detection research and development includes sensor development, advanced data processing, and systems integration to support cooperative and noncooperative monitoring requirements for bilateral and multilateral nonproliferation treaties and the detection technology requirements to counter the threat from weapons of mass destruction. The program leads the development of detection technology to support verification and transparency requirements for nuclear warhead dismantlement, international safeguarding of excess US fissile materials, and advanced analytical techniques to detect the diversion or use of nuclear materials and other weapons of mass destruction.

The program exploits the national laboratory capability in chemical and biological sciences in particular the skills and resources supporting the Human Genome Project coupled with proliferation knowledge from nuclear arms control activities to counter the proliferation of chemical and biological weapons. Starting in FY1997, this comprehensive program, coordinated with other federal agencies, will assess the biological and chemical weapons threat and will pursue a coordinated research and development program to apply advanced analytical methods and emerging detection technologies to detect and counter the threat from chemical and biological weapons.

In FY 1998, new initiatives will focus research and development on technologies to counter nuclear smuggling and terrorism. Existing research to develop sensors and infield analytical tools will be accelerated to demonstrate and make available advanced and unique technologies to the US law enforcement an intelligence communities.

All of these efforts are focused on near term deliverables of prototype detection technologies and analytical methods for timely support of both current and future U.S. Government policies and initiatives. The program is driven by both evolving and long-standing priorities of the arms control, intelligence, and law enforcement communities. This program brings the unique technical expertise of the national

II. Funding Schedule:

| Program Activity | FY 1996 | FY 1997 | FY 1998 | FY 1999 | $ Change | % Change |
|---|---|---|---|---|---|---|
| Material Detection | $ 59,558 | $ 60,962 | $ 60,493 | $ 76,000 | $ -469 | -1% |
| Total | $ 59,558 | $ 60,962 | $ 60,493 | $ 76,000 | $ -469 | -1% |

| III. Performance Summary: | FY 1996 | FY 1997 | FY 1998 | FY 1999 |
|---|---|---|---|---|
| • Develop and commericalize cooperative in-field analysis technologies and remote monitoring systems to enhance international safeguards, to build confidence for bilateral and IAEA agreements, and to support arms control requirements. | $15,000 | $9,800 | $7,500 | $8,900 |
| • Develop advanced radiation detection technologies and systems for national security programs supporting counterterrorism, nonproliferation, and arms control initiatives. Develop alternate safeguards and warhead dismantlement transparency technologies to support departmental initiatives in the control and accountability of Russian and FSU fissile materials. | $ 9,558 | $7,062 | $7,100 | $8,500 |
| • Develop the technical means to conduct broad area search to detect underground structures in support of Department of Defense and Intelligence Community needs. | $11,000 | $7,700 | $3,993 | $4,000 |
| • Develop micro-sensor detection technologies and advanced prototype for nonproliferation applications for use by the Intelligence Community. | $ 7,500 | $7,500 | $7,500 | $8,900 |
| • Develop technologies for detecting/preventing nuclear smuggling. The focus will be on technologies by law enforcement agencies. Continue to develop improved field and laboratory capabilities for nuclear forensic analysis of small samples in support of Intelligence and Law Enforcement Communities. | $16,500 | $15,400 | $17,400 | $21,700 |
| • Develop and demonstrate prototype instruments to detect chemical and biological threats at sub-lethal levels, develop transport models for fate analyses studies and to investigate decontamination technologies. | $ 0 | $13,500 | $17,000 | $24,000 |
| Total Material Detection | $59,558 | $60,962 | $60,493 | $76,000 |

Explanation of funding changes from FY 1997 to FY 1998:

Related programs have been consolidated by mission application to better coordinate and manage research and development activities. Material Detection is a consolidation of projects that previously were components of the former On-Site Systems, Regional Monitoring, and Advanced Systems subprograms. The funding schedule table shows the FY 1997 funding for the projects that are being consolidated into the FY 1998 Material Detection subprogram. Managing projects by mission application is expected to result in greater collaboration and efficiency in addressing critical nonproliferation and national security needs.

| | |
|---|---|
| Significant program shift has occurred starting in FY 1997 with the initiation of a program to address Chemical and Biological Weapons Proliferation. This is being increased with the reallocation from within existing funds to prioritize technologies that address this emerging threat. Also, in FY 1998 funds have been reallocated to strengthen the program addressing nuclear materials smuggling. | +$5,500 |
| Programs to detect and characterize underground structures and programs to search broad areas for proliferation activities as well as the cooperative monitoring research for arms control requirements were have been reduced in scope and refocused along with some other general reductions to address new emphasis on CW/BW and counter nuclear smuggling program. | -$5,969 |
| Total Funding Change, Material Detection | -$ 469 |

## NONPROLIFERATION AND VERIFICATION RESEARCH AND DEVELOPMENT

### TREATY MONITORING

Mission Supporting goals and Objectives:

Develop and demonstrate technologies for monitoring international treaties banning the explosive testing of nuclear devices. Develop and field sensors and algorithms, which will, in a timely manner, detect, locate, identify, and characterize nuclear explosions which might occur underground, underwater, in the atmosphere, or in space.

The test ban treaty monitoring technology program is one of the Department of Energy's longest standing nonproliferation efforts. The concept of satellite-borne nuclear explosion surveillance came about during interagency discussions from 1959 to 1962, leading to deployment of the original Vela explosion sensors. During the 37 years of this program 60 Department of Energy satellite payloads have been launched, using U.S. Air Force and National Aeronautics and Space Administration boosters. The national need for worldwide cognizance of nuclear explosions that might occur is as important as ever in this time of high nuclear proliferation concern.

On August 11, 1995 President Clinton stated, "One of my administration's highest priorities is to negotiate a Comprehensive Test Ban Treaty.... I am committed to pursuing a comprehensive research and development program to improve our treaty-monitoring capabilities and operations." National responsibility for executing CTBT R&D was consolidated in this Department of Energy program in 1993. OnSeptember 24, 1996, President Clinton signed the CTBT as soon as it was open for signature. The DOE CTBT R&D program is now focused on supporting the Preparatory Commission and the ratification process which proceeds treaty entry into force.

The Comprehensive Test Ban Treaty (CTBT) R&D goal is to develop and demonstrate technologies for monitoring the CTBT. This research and development (R&D) program, in preparing for both international and U.S. national monitoring of a CTBT, addresses technologies for monitoring for underground, underwater, atmospheric, and space-based nuclear explosions.

Funding Schedule:

| Program Activity | FY 1996 | FY 1997 | FY 1998 | FY 1999 | $ Change | % Change |
|---|---|---|---|---|---|---|
| Treaty Monitoring | $ 74,066 | $ 81,257 | $ 81,257 | $ 85,000 | $ 0 | 0% |
| Total | $ 74,066 | $ 81,257 | $ 81,257 | $ 85,000 | $ 0 | 0% |

III. Performance Summary:

| | FY 1996 | FY 1997 | FY 1998 | FY 1999 |
|---|---|---|---|---|
| • Develop and demonstrate technologies for monitoring for underground, underwater, atmospheric, and space-based nuclear explosions for both international and U.S. national monitoring of a CTBT. Characterize regional seismic signals from industrial and natural sources to increase the reliability of analysis to distinguish industrial seismic activity from potential nuclear weapons testing. Field test fully automated, near-real-time radionuclide sampler/analyzer and initiate commercialization. Develop location and performance specifications for a fixed, cabled hydroacoustic system. Select wide-band infrasound sensors and evaluate proposed network detection capabilities. | $29,000 | $31,000 | $31,000 | $30,000 |
| • Develop and produce satellite-based nuclear detonation detection sensor systems for independent US capability to monitor compliance with nuclear test ban treaties. Produce, deliver, and operationally support four Global Positioning System (GPS) satellite nuclear explosion detection flight systems per year. Develop and demonstrate the next generation of satellite-based optical, electromagnetic pulse, and particle sensor systems for detecting nuclear explosions in space and in the atmosphere. Launch the Fast On-orbit Recording of Transient Events (FORTE') small satellite demonstrating next generation techniques for detecting and characterizing electromagnetic pulses from nuclear explosions in the atmosphere. Develop small, satellite-based sensor package to be employed on the replacement to the Defense Support Program satellite for detecting nuclear explosions in space. | $45,066 | $50,257 | $50,257 | $55,000 |
| Total Treaty Monitoring | $74,066 | $81,257 | $81,257 | $85,000 |

Explanation of funding changes from FY 1997 to FY 1998:

Related programs have been consolidated by mission application to better coordinate and manage research and development activities. Treaty Monitoring is a consolidation of projects that previously were components of the former Remote Sensing Systems and Regional Monitoring subprograms. The funding schedule table shows the FY 1997 funding for the projects that are being consolidated into the FY 1998 Treaty Monitoring subprogram. Managing projects by mission application is expected to result in greater collaboration and efficiency in addressing critical nonproliferation and national security needs.

## NONPROLIFERATION AND VERIFICATION RESEARCH AND DEVELOPMENT

## PROLIFERATION DETECTION

I. Mission Supporting Goals and Objectives:

Develop and demonstrate innovative proliferation detection technologies including passive and active (laser-based) electro-optical remote chemical detection, space-based multi spectral and thermal imagery, and advanced data analysis. The multi laboratory and joint interagency projects within this subprogram area are comprehensive, end-to-end research and development activities that (1) examine the nature of proliferation targets to determine remotely observable signatures, (2) conduct phenomena modeling to understand the environment's effects on the observables and how these effects can be overcome, (3) develop sensor systems to remotely measure the observables, (4) and develop exploitation techniques to interpret the data and produce meaningful information.

These programs are closely coordinated with other activities within the government, and as a new initiative in FY 1998, the methodology and experience that has resulted in significant advances in the nuclear proliferation mission area, will be applied to the chemical and biological weapons proliferation arena. By increasing the scope of projects in this subprogram area to address chemical and biological weapons proliferation in addition to nuclear proliferation, research required to understand the signal strength and signature of CW/BW observables, modify the sensors, and interpret the data will be conducted. Many of the sensor systems designed to detect chemical signatures from nuclear weapons activities can be used to detect chemical signatures from chemical and potentially biological weapons activities. New remote sensors to detect biological observables will be developed.

II. Funding Schedule:

| Program Activity | FY 1996 | FY 1997 | FY 1998 | FY 1999 | $ Change | % Change |
|---|---|---|---|---|---|---|
| Proliferation Detection | $ 75,871 | $ 69,700 | $ 68,250 | $ 75,000 | $ -1,450 | -2% |
| Total | $ 75,871 | $ 69,700 | $ 68,250 | $ 75,000 | $ -1,450 | -2% |

III. Performance Summary:

| | FY 1996 | FY 1997 | FY 1998 | FY 1999 |
|---|---|---|---|---|
| • Perform ground-based field tests of laser remote sensing systems to extend system performance beyond current state of the art, and continue signature work on excursions from baseline scenarios to broaden the performance envelope of remote chemical detection. Conduct a joint airborne LIDAR test with USAF Phillips Laboratory and the Edgewood Research Development and Engineering Center (ERDEC) to demonstrate lidar utility and to strengthen the collaboration between researchers and users in the remote chemical detection of proliferation activities. Build a prototype of a small portable short range chemical detection lidar system for nonproliferation and counterproliferation applications. Demonstrate long-range capabilities of an advanced lidar system which will detect and characterize chemicals associated with nuclear, chemical, and biological weapon proliferation activities. Field test small portable lidar system and conduct airborne experiment of a short-range chemical detection lidar system on board an Unmanned Aerial Vehicle which will allow deployment of chemical detection capability to areas of need by Intelligence Community and Military forces. | $33,081 | $26,970 | $27,000 | $34,000 |
| • Design and deliver an integrated prototype system of complex change detection algorithms to enhance the information content and adapt algorithms to other synthetic aperture radar (SAR) systems. Complete data collection and characterization of daytime phenomena influencing thermal signatures, and developed initial signal processing algorithms for infrared radiometric compensation; exploited spatial, spectral and observation-angle variation properties of materials to identify chemical signatures related to nonproliferation activities. Develop algorithms to extract higher quality information from infrared sensor data to extend capabilities for detecting proliferation activities. | $9,240 | $9,570 | $8,300 | $8,300 |

| | | | | |
|---|---|---|---|---|
| • Continue development of sensors and subsystems for integration on the Multispectral Thermal Imager (MTI) small satellite, which will demonstrate and evaluate multispectral and thermal imaging technologies for the passive, noncooperative detection and characterization of proliferant activities. Complete fabrication of the MTI small satellite. Begin pre-launch integration and testing of MTI payload and satellite systems. Continue coordination with arms control, military, and other users of MTI data to refine test plans and operations concepts. | $27,000 | $23,400 | $20,950 | $18,000 |
| • Continue development and complete fabrication of an airborne, high-spectral resolution imaging spectroradiometer for passive detection of nuclear proliferation chemical effluents and field test this system as part of interagency effort to develop this technology. Apply chemical signatures work conducted by DOE lidar programs to passive imaging detection and characterization of nuclear, chemical, and biological weapons proliferation activities. | $6,550 | $9,760 | $12,000 | $14,700 |
| Total Proliferation Detection | $75,871 | $69,700 | $68,250 | $75,000 |

Explanation of funding changes from FY 1997 to FY 1998:

Related programs have been consolidated by mission application groups to better coordinate and manage research and development activities. Proliferation Detection is a consolidation of projects that previously were components of the former Remote Sensing Systems and Advanced Systems subprograms. The funding schedule table shows the FY 1997 funding for the projects that are being consolidated into the FY 1998 Proliferation Detection subprogram.

| | |
|---|---|
| Major satellite and instrument subcontracts for the Multispectral Thermal Imager small satellite have been placed with delivery and integration starting in FY 1998 for a scheduled FY1999 launch. | -$2,450 |
| The high-spectral resolution imaging spectroradiometer program costs increase to account for prototype instrument production and airborne test and evaluation. | +$2,240 |
| Programs to develop algorithms for the exploitation of SAR data have been reduced in scope and refocused along with some other general reductions to address the expansion of detection of CW/BW agents from stand-off distances. | -$1,240 |
| Total Funding Change, Proliferation Detection | -$1,450 |

**NONPROLIFERATION AND VERIFICATION RESEARCH AND DEVELOPMENT**
**CAPITAL OPERATING EXPENSES & CONSTRUCTION SUMMARY**
(Dollars in Thousands)

| Capital Operating Expenses | FY 1996 | FY 1997 | FY 1998 | FY 1999 | $ Change | % Change |
|---|---|---|---|---|---|---|
| GPP (total) | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | 0.0% |
| AIP (total) | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | 0.0% |
| CDR & Bridge (in excess of $3M) | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | 0.0% |
| Major Items of Equipment | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 | 0.0% |
| Basic Capital Equipment | $ 12,500 a/ | $ 11,444 a/ | $ 10,233 a/ | $ 10,233 a/ | $ -1,221 | -10.6% |

a/ Capital Equipment values are non-add values. The funds for capital related expenses are included in each of the Office of Research and Development program areas instead of a separate Facilities Operations line.

**DEPARTMENT OF ENERGY**
**FY 1998 CONGRESSIONAL BUDGET REQUEST**
**OTHER DEFENSE ACTIVITIES**
**(Tabular dollars in thousands, Narrative in whole dollars)**

## ARMS CONTROL AND NONPROLIFERATION

## PROGRAM MISSION

The Arms Control and Nonproliferation Program is the focal point within the Department for activities which support the President's arms control and nonproliferation policies, goals and objectives as well as statutorily-mandated activities. The major functional areas of the program include: Policy and Analysis; Reduced Enrichment Research and Test Reactor (RERTR); International Safeguards; Export Control Operations; Treaties and Agreements; International Security; and International Materials Protection, Control, and Accounting (MPC&A). The program provides leadership and representation for the Department in the U.S. Government's interagency process, and for the U.S. Government in the national and international arms control and nonproliferation communities and organizations.

The GOAL of the Arms Control and Nonproliferation Program is to: reduce the threat of nuclear proliferation by integrating and orchestrating the Department's assets and efforts, including those of its national laboratories and contractors, in providing major policy and technical support to the U.S. Government's foreign policy and national security objectives in the areas of arms control and nonproliferation, and to the international arms control and nonproliferation communities.

The priority **OBJECTIVES** related to this goal are:

1. Secure Nuclear Materials and Expertise in Russia and the Newly Independent States.
2. Limit Weapon-Usable Fissile Materials.
3. Establish Transparent and Irreversible Nuclear Reductions.
4. Strengthen the Nuclear Nonproliferation Regime.
5. Control Nuclear Exports.

The Department has integrated its planning of natural security programs aimed at reducing the danger of nuclear smuggling and the associated potential for nuclear terrorism. Activities in the Arms Control and Nonproliferation program principally support this objective by creating barriers to illegal diversion of fissile and radiological material at their source.

Specific Arms Control and Nonproliferation mission, performance measures and significant planned accomplishments relative to nuclear smuggling are provided in the International Safeguards and Export Control Operations functional areas.

PERFORMANCE MEASURES:

1. For Russia and the Newly Independent States, establish improved MPC&A programs at 44 facilities including completion of upgrades at more than 20 facilities by the end of 1998.

a)

2. Number of nuclear smuggling incidents involving more than 10 grams of fissile material is zero.

a)

3. Conduct 52 inspections in Russia and the United States of fissile materials removed from nuclear weapons.

a)

4. Unilateral nuclear export controls are reduced and eventually replaced with multilateral controls.

a)

5. Under the IPP, a total of 4,900 weapons scientists, engineers, and technicians will be engaged in peaceful projects at their institutes, 1,000 of which will be newly engaged based on FY 1998 funding.

a)

SIGNIFICANT ACCOMPLISHMENTS AND PROGRAM SHIFTS:

- Played a pivotal role in achieving an indefinite extension of the Nuclear Nonproliferation Treaty (NPT).

- Provided leadership for DOE and national laboratories' activities aimed at assisting Russia and other states of the Former Soviet Union in critical areas such as export controls, nuclear materials control and accounting, and physical protection.

- DOE's efforts to secure nuclear materials and expertise in Russia and the Newly Independent States have expanded rapidly since their beginning. From one site involving 75 kilograms of highly enriched uranium (HEU) in 1994, the program achieved materials protection, control and accounting (MPC&A) upgrades over 8 tons of plutonium and HEU at 26 facilities in 1995.

ARMS CONTROL AND NONPROLIFERATION
PROGRAM FUNDING PROFILE
(Dollars in Thousands)

| Sub-program | FY 1996 Enacted Approp. | FY 1997 Enacted Approp. | FY 1998 Budget Request | FY 1999 Request |
|---|---|---|---|---|
| Policy and Analysis | $ - | $ - | $ 19,571 | $ 19,571 |
| Analytical Support | $ 17,115 | $ 12,859 | $ - | $ - |
| Nuclear Nonproliferation Policy | $ 5,863 | $ 8,587 | $ - | $ - |
| Reduced Enrichment Research and Test Reactor (RERTR) Program | $ 3,784 | $ 6,422 | $ 6,222 | $ 6,222 |
| International Safeguards | $ 21,602 | $ 18,941 | $ 18,751 | $ 18,751 |
| Export Control Operations | $ 16,377 | $ 15,302 | $ 14,952 | $ 14,952 |
| International Materials Protection, Control, and Accounting | $ 85,000 | $ 112,637 | $ 137,008 | $ 137,008 |
| Treaties and Agreements | $ 2,540 | $ 4,028 | $ 3,528 | $ 21,843 |
| International Security | $ 17,700 | $ 37,468 | $ 34,568 | $ 34,568 |
| Program Director | $ 5,000 | | | |
| Subtotal, Operations and Maintenance | $ 174,981 | $ 216,244 | $ 234,600 | $ 252,915 |
| Adjustment | $ - | $ - | $ - | $ - |
| TOTAL, Arms Control | $ 174,981 | $ 216,244 | $ 234,600 | $ 252,915 |

ARMS CONTROL AND NONPROLIFERATION
PROGRAM FUNDING BY SITE
(Dollars in Thousands)

| Field Offices/Sites | FY 1996 Enacted Approp. | FY 1997 Enacted Approp. | FY 1998 Budget Request | FY 1999 Request |
|---|---|---|---|---|
| Albuquerque Operations Office | $ 9,630 | $ 29,600 | $ 29,600 | $ 29,600 |
| Los Alamos National Lab | $ 35,312 | $ 39,631 | $ 45,886 | $ 45,886 |
| Pantex | $ 575 | $ 625 | $ 825 | $ 825 |
| Sandia National Labs | $ 28,797 | $ 35,895 | $ 43,430 | $ 43,430 |
| Chicago Operations Office | | | | |
| Argonne National Lab | $ 8,980 | $ 9,805 | $ 10,640 | $ 10,640 |
| Brookhaven National Lab | $ 8,717 | $ 6,125 | $ 12,731 | $ 12,731 |
| New Brunswick Lab | $ 173 | $ 260 | $ 260 | $ 260 |
| Oakland Operations Office | $ 2,075 | $ 1,218 | $ 1,218 | $ 1,218 |
| Lawrence Livermore National Lab | $ 23,571 | $ 24,918 | $ 32,353 | $ 32,353 |
| Oak Ridge Operations | | | | |
| Oak Ridge National Lab | $ 14,492 | $ 21,515 | $ 26,180 | $ 26,180 |
| Richland Operations Office | | | | |
| Pacific Northwest National Lab | $ 16,328 | $ 17,260 | $ 25,005 | $ 25,005 |
| Savannah River Operations Office | $ 6,970 | $ 4,375 | $ 4,575 | $ 4,575 |
| Nevada Operations Office | $ 1,116 | $ 290 | $ 290 | $ 290 |
| Washington Headquarters | $ 17,991 | $ 3,492 | $ 1,607 | $ 1,607 |
| All Other | $ 254 | $ 21,235 | $ - | $ 18,315 |
| Subtotal | $ 174,981 | $ 216,244 | $ 234,600 | $ 252,915 |
| Adjustment | $ - | $ - | $ - | $ - |
| TOTAL | $ 174,981 | $ 216,244 | $ 234,600 | $ 252,915 |

## ARMS CONTROL AND NONPROLIFERATION

## POLICY AND ANALYSIS

I. Mission Supporting Goals and Objectives

Arms Control and Nonproliferation Policy and Analysis provides technical expertise and analytical support for arms control and nonproliferation treaty and agreement policy formulation, negotiation, and implementation at DOE facilities and in regional security arrangements. Assistance is provided to the State Department for increased contact with potential proliferant states to explore motives driving proliferation aspirations, and to engage DOE technical resources for training, confidence-building measures, implementation and verification of treaties, cooperative monitoring, and application of technology to facilitate proliferation prevention and roll-back. Resources are applied for global and regional arms control and nonproliferation treaties (NPT, CTBT, FMCT) and cooperative analysis of nuclear fuel cycle and environmental situations that destabilize international relations and threaten regional security. Analysis is performed on measures and verification options for a multilateral fissile material production cutoff convention and bilateral cutoff with Russia; implementing a reciprocal monitoring regime for U.S./Russian nuclear weapon dismantlement and fissile material disposition; developing and refining procedures for confirming stockpiles of removed materials, and alternative cost-effective dismantlement transparency, verification, and chain of custody measures. In addition, analysis is performed on verification of nuclear weapon free zones, securing HEU in the Former Soviet Union, and regional confidence building. Assistance is also provided for implementation of the U.S./Russian agreement for exchange of technical information on nuclear warhead safety and supporting projects for continued employment of former Soviet Union scientists in non-weapon activities.

II. Funding Schedule:

| Program Activity | FY 1996 | FY 1997 | FY 1998 | $ Change | % Change |
|---|---|---|---|---|---|
| Policy and Analysis | $ 0 | $ 0 | $ 19,571 | $ +19,571 | +91.0 |
| Analytical Support | 17,115 | 12,859 | 0 | -12,859 | -100.0 |
| Nuclear Nonproliferation Policy | 5,863 | 8,587 | 0 | -8,587 | -100.0 |
| Total, Policy and Analysis | $ 22,978 | $ 21,446 | $ 19,571 | $ -1,875 | -9.0 |

| III. Performance Summary-Accomplishments: | FY1996 | FY1997 | FY1998 |
|---|---|---|---|
| • Limit weapons-usable fissile materials through worldwide stockpile reductions of plutonium and HEU, shutdown of production reactors, and increased focus on proliferation implications of and solutions for key nuclear fuel cycle decisions and development and implementation obligations under Agreements for Cooperation with other states. | 1,010 | 1,815 | 1,520 |
| • Continue technical programs to support regional energy, environmental, and security exchanges involving such concerns as cooperative monitoring, verification, arms control and nonproliferation training; trans-border environmental impacts, which impact regional stability in the Middle East, South Asia and Northeast Asia. | 5,361 | 6,327 | 6,550 |
| • Enable completion of CTBT negotiations, ratification and implementation, including support for U.S. responsibilities in the Prepartory Commission and for on-site inspections at DOE facilities. | 4,200 | 2,415 | 2,196 |
| • Work with Russia and other FSU republics to establish transparent and irreversible nuclear reductions. | 5,989 | 6,994 | 6,110 |
| • Provide analytical and technical support to ongoing negotiations and preparatory to implementation of agreements or treaties such as the Fissile Materials Cutoff Treaty and Biological Weapons Convention, on such issues as transparency, inspection of sensitive DOE facilities, and verification. | 4,225 | 1,795 | 750 |
| • Continue U.S. scientific cooperative programs with Russian and Chinese scientific counterparts on non-weapons programs, including exchanges such as nonproliferation, arms control, and verification technology. | 2,193 | 2,100 | 2,445 |
| **Total, Policy and Analysis** | **22,978** | **21,446** | **19,571** |

Explanation of Funding Changes FY 1997 to FY 1998:

| | | |
|---|---|---|
| **FY1997 Enacted Appropriation** | **$** | **21,446** |
| Additional collaborative support planned for the fuel cycle production process model from other sources. | | -295 |
| Increase cooperative monitoring and other regional exchanges. | | +223 |
| Complete plans for implementation phase of many verification and inspection aspects of treaty compliance. Anticipate successful U.S. ratification process. | | -219 |
| Reduction of HEU transparency, transport, mutual reciprocal technical analysis. | | -884 |
| Reduction anticipated due to the rate of negotiations of the Fissile Material Cutoff Treaty. | | -1,045 |
| Expand exchanges with China to include export control technology, MPC&A implementation, and formalized interactions with a program for verification technology. | | +345 |
| **FY1998 Budget Request** | **$** | **19,571** |

## ARMS CONTROL AND NONPROLIFERATION

## REDUCED ENRICHMENT RESEARCH AND TEST REACTOR (RERTR)

I. Mission Supporting Goals and Objectives

Reduced Enrichment Research & Test Reactor (RERTR) Program supports development of low enriched uranium (LEU) fuels to further LEU conversion of research and test reactors; expedited return of U.S. origin research reactor spent fuel from overseas; and development of targets and chemical processes for producing molybdenum-99 using LEU. New funding will support development of advanced high density LEU fuels for Russian and Chinese reactors and remaining unconverted reactors in Western Europe and the U.S.

II. Funding Schedule:

| Program Activity | FY 1996 | FY 1997 | FY 1998 | $ Change | % Change |
|---|---|---|---|---|---|
| Reduced Enrichment Research & Test Reactor | $ 3,784 | $ 6,422 | $ 6,222 | $ -200 | -3.1 |
| Total, Reduced Enrichment Research & Test Reactor | $ 3,784 | $ 6,422 | $ 6,222 | $ -200 | -3.1 |

III. Performance Summary-Accomplishments:

| | FY1996 | FY1997 | FY1998 |
|---|---|---|---|
| • Continue cooperative activities with Russian laboratories on implementation of Russian agreements and the development of LEU Fuels for Russia. Begin studies of Russian Reactor conversion. | 550 | 1,047 | 1,250 |
| • Initiate return of U.S.-origin spent nuclear research reactor fuel from abroad under the EIS. Conduct IAEA laboratory cooperation to facilitate receipt of U.S.-origin spent nuclear fuel. | 220 | 255 | 200 |
| • Conduct exchange visits with Chinese laboratories and start cooperative exchanges with China on RERTR, and develop joint plan for reactor conversion with China. | 0 | 93 | 400 |

III. Performance Summary-Accomplishments:

| | | | |
|---|---|---|---|
| • Initiate development of high density LEU fuels for research reactors. | 1,016 | 2,762 | 2,472 |
| • Continue development of LEU targets for molybdenum-99 production. Begin with U.S.- South African Cooperation on production using LEU. | 1,100 | 1,151 | 1,250 |
| • Continue conversion efforts of U.S. reactors and pursue cooperation on reactor conversion with Eastern Europe and South Africa. | 898 | 1,114 | 650 |
| **Total, Reduced Enrichment Research and Test Reactor** | **3,784** | **6,422** | **6,222** |

Explanation of Funding Changes FY 1997 to FY 1998:

| | | |
|---|---|---|
| **FY1997 Enacted Appropriation** | **$** | **6,422** |
| Reduction in number of test irradiations on newly developed high density fuels for reactor conversions. | | - 200 |
| **FY1998 Budget Request** | **$** | **6,222** |

## ARMS CONTROL AND NONPROLIFERATION

## INTERNATIONAL SAFEGUARDS

I. Mission Supporting Goals and Objectives

International Safeguards provides policy and technical leadership and funds efforts to strengthen the Nuclear Nonproliferation Regime, particularly on global nuclear material security. These efforts improve the cost-effectiveness of the International Atomic Energy Agency (IAEA) in detecting clandestine nuclear activities and safeguarding declared nuclear material. New approaches such as environmental monitoring, remote monitoring, and information management tools are addressed. Policy and technical support is provided to DOE program offices and sites for the implementation of IAEA Safeguards on U.S. excess material at DOE sites under bilateral and trilateral (with Russia) arrangements. Verification measures are developed, incoordination with the International Policy and Analysis activity and the Office of Research and Development, for implementing a fissile material cut-off treaty. IAEA technical assistance programs that promote peaceful use of atomic energy and bilateral nuclear cooperation efforts through "sister lab" arrangements are supported. Agreements for safeguards cooperation are negotiated and implemented for improved material protection, control, accountancy, and transparency with other countries, regions, and international organizations, including China, Japan, South Africa, South Korea, IAEA, European Atomic Energy Community (EURATOM), Argentina, Brazil, Argentine-Brazil Accounting and Control Commission (ABACC), and Australia. Manage physical protection program to ensure that all countries that possess U.S.-origin nuclear materials are adequately protected against, theft, sabotage, and nuclear smuggling. Manage and operate the International Nuclear Material Tracking and Analysis Program (INA), for tracking and analyzing domestic (NMMSS) and foreign nuclear materials.

II. Funding Schedule:

| Program Activity | FY 1996 | FY 1997 | FY 1998 | $ Change | % Change |
|---|---|---|---|---|---|
| International Safeguards | $ 21,602 | $ 18,941 | $ 18,751 | $ -190 | -1.0 |
| Total, International Safeguards | $ 21,602 | $ 18,941 | $ 18,751 | $ -190 | -1.0 |

| III. Performance Summary-Accomplishments: | **FY1996** | **FY1997** | **FY1998** |
|---|---|---|---|
| • Provide technical experts, training and equipment to IAEA and UNSCOM for inspections in Iraq and North Korea. | 1,500 | 1,200 | 1,100 |
| • Provide technical advice, support, and technologies (e.g., environmental monitoring, remote monitoring, and information management tools) to IAEA for development of new strengthened safeguards policies and methods. | 5,600 | 4,300 | 3,700 |
| • Per NNPA-78, Section 202, provide training on safeguards and physical protection to nationals of nuclear developing countries. | 100 | 850 | 500 |
| • Implement U.S., IAEA, and Russian Trilateral verification program to develop and apply IAEA measures on U.S. and Russian excess nuclear weapons material. | 0 | 200 | 400 |
| • Per Presidential Decision Directive 41, continue IAEA inspections on current U.S. nuclear material under IAEA safeguards and submit additional U.S. excess material from the 200 metric tons to IAEA safeguards. Evaluate new options for non-intrusive monitoring of excess fissile material. | 3,100 | 2,700 | 2,700 |
| • Promote peaceful use of Atomic Energy through support to IAEA technical cooperation activities, sister laboratory arrangements, and promotion of NPT. | 350 | 500 | 550 |
| • Continue cooperation with South American, Asian, and European partners to strengthen safeguards on uranium and plutonium. | 3,102 | 3,691 | 3,401 |

| III. Performance Summary-Accomplishments: | FY1996 | FY1997 | FY1998 |
|---|---|---|---|
| • Per NNPA-78, lead USG teams on visits to countries with U.S.-origin nuclear material to ensure adequate physical protection. | 300 | 500 | 400 |
| • Provide technical assistance to countries and support new IAEA program to implement improvements to physical protection systems in foreign countries to prevent against theft, sabotage, and smuggling. | 0 | 0 | 1,000 |
| • Operate Nuclear Materials Management and Safeguards System (NMMSS) to track and analyze U.S. and foreign nuclear material inventories and transactions. | 7,500 | 5,000 | 5,000 |
| **Total, International Safeguards** | **21,602** | **18,941** | **18,751** |

Explanation of Funding Changes FY 1997 to FY 1998:

| | | |
|---|---|---|
| **FY1997 Enacted Appropriation** | **$** | **18,941** |
| Increase in programs to curb nuclear smuggling by improving physical security arrangements in non-FSU states. | | +1,000 |
| Decrease in IAEA-related activities. | | -1,190 |
| **FY1998 Budget Request** | **$** | **18,751** |

## ARMS CONTROL AND NONPROLIFERATION

## EXPORT CONTROL OPERATIONS

I. Mission Supporting Goals and Objectives

Export Control Operations advance U.S. nonproliferation export control objectives by developing and implementing policies, regulations, and procedures to halt the spread of weapons of mass destruction; control the export of nuclear and nuclear-related equipment, materials, and technologies as mandated by law and in accordance with national security objectives; and provide unique technical expertise and training for the U.S. and international nonproliferation communities.

II. Funding Schedule:

| Program Activity | FY 1996 | FY 1997 | FY 1998 | $ Change | % Change |
|---|---|---|---|---|---|
| Export Control Operations | $ 16,377 | $ 15,302 | $ 14,952 | $ -350 | -2.3 |
| Total, Export Control Operations | $ 16,377 | $ 15,302 | $ 14,952 | $ -350 | -2.3 |

III. Performance Summary-Accomplishments:

| | **FY1996** | **FY1997** | **FY1998** |
|---|---|---|---|
| Assist FSU States in effectively controlling exports | | | |
| • Enhance government-to-government export control initiatives and on-going lab-to-lab cooperative agreements by developing joint technical exchanges with Russia and the Newly Independent States, and supporting the Graduate Student Facilitator Program (GSFP) in Russia and the Newly Independent States. | 1,836 | 1,915 | 1,915 |
| Reform statutory licensing requirements | | | |
| • Review and provide recommendations to the Nuclear Regulatory Commission and the Department of Commerce on nuclear and nuclear-related dual-use licenses, representing DOE on all interagency fora (e.g., the Advisory Committee on Export Policy and the Interagency Working Group on Nonproliferation and Export Controls), in support of mandated responsibilities. | 4,345 | 3,992 | 3,870 |

| III. Performance Summary-Accomplishments: | FY1996 | FY1997 | FY1998 |
|---|---|---|---|
| • Administer for the Department, the controls on the transfer of technology and assistance under 10 CFR Part 810. | 750 | 685 | 685 |
| Strengthen multilateral supplier initiatives | | | |
| • Serve as the principal U.S. agency in negotiating controls over nuclear and nuclear-related dual-use materials, equipment, and technologies, especially within the Nuclear Suppliers Group and the Nonproliferation Treaty Exporter's Committee (Zangger Committee). Includes ongoing activities to harmonize unilateral and multilateral controls as mandated by PDD-13. These activities include current negotiations to control conversion technologies for uranium, plutonium and thorium, as well as dual-use controls for weapons simulations and computer codes. | 2,440 | 2,335 | 2,285 |
| • Develop, implement, and support a computerized information sharing system in the Nuclear Suppliers Group for the timely sharing of export denials among the 34 Subscribing Governments. | 750 | 575 | 575 |
| Promote expanded information sharing and analysis | | | |
| • Ensure the viability of Proliferation Information Network System (PINS) to support the DOE license processing system. Refine and expand the PINS to include more users within the Department of Energy community. | 3,425 | 2,580 | 2,002 |
| Technology Security | | | |
| • Ensure that DOE surplused equipment and technology is disposed of in a responsible manner and that technology transfers are consistent with regard to U.S. export control and nonproliferation policy. | 2,310 | 2,310 | 2,210 |

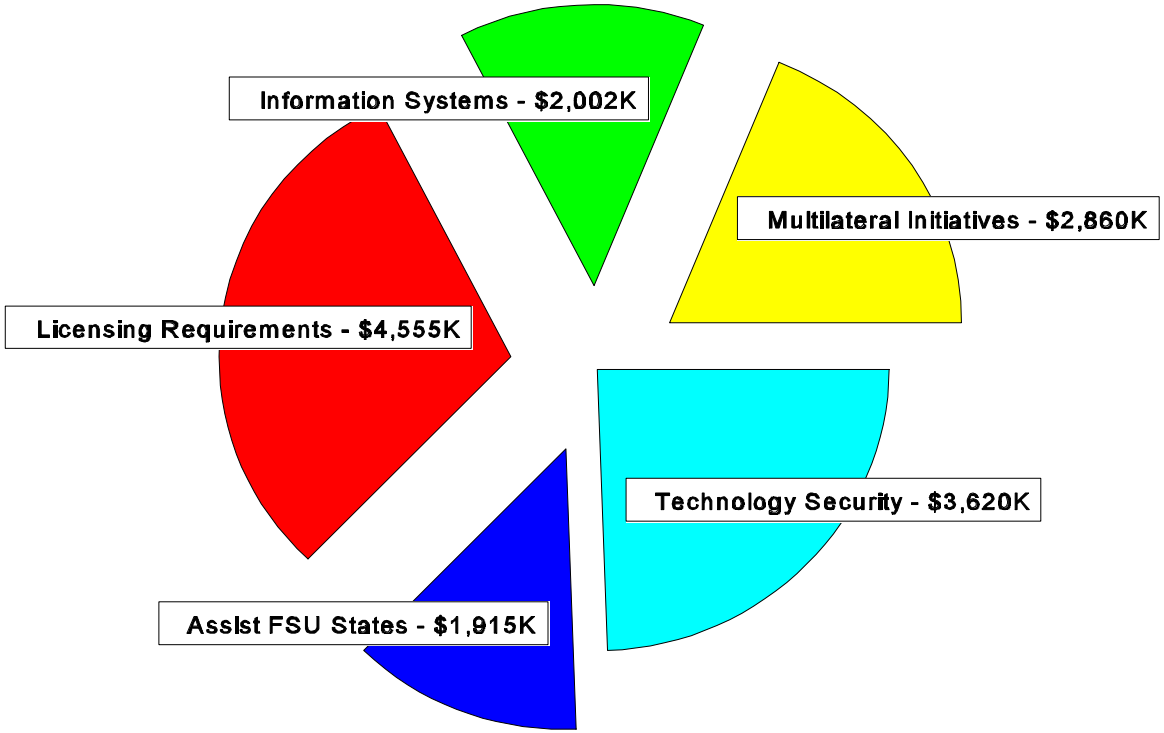
| III. Performance Summary-Accomplishments: | FY1996 | FY1997 | FY1998 |
|---|---|---|---|
| • Conduct technology security reviews for DOE-funded foreign travel, visits and assignments to DOE facilities, technical exchanges, and export of DOE-controlled technology. Provide program and systems support for the Sensitive Country Information Logging System. | 421 | 410 | 410 |
| • Participate in DOE, USG, and multilateral activities to combat nuclear smuggling and the illicit transfer of technologies for the production, utilization, and detonation of special nuclear material. | 100 | 500 | 1,000 |
| **Total, Export Control Operations** | **16,377** | **15,302** | **14,952** |

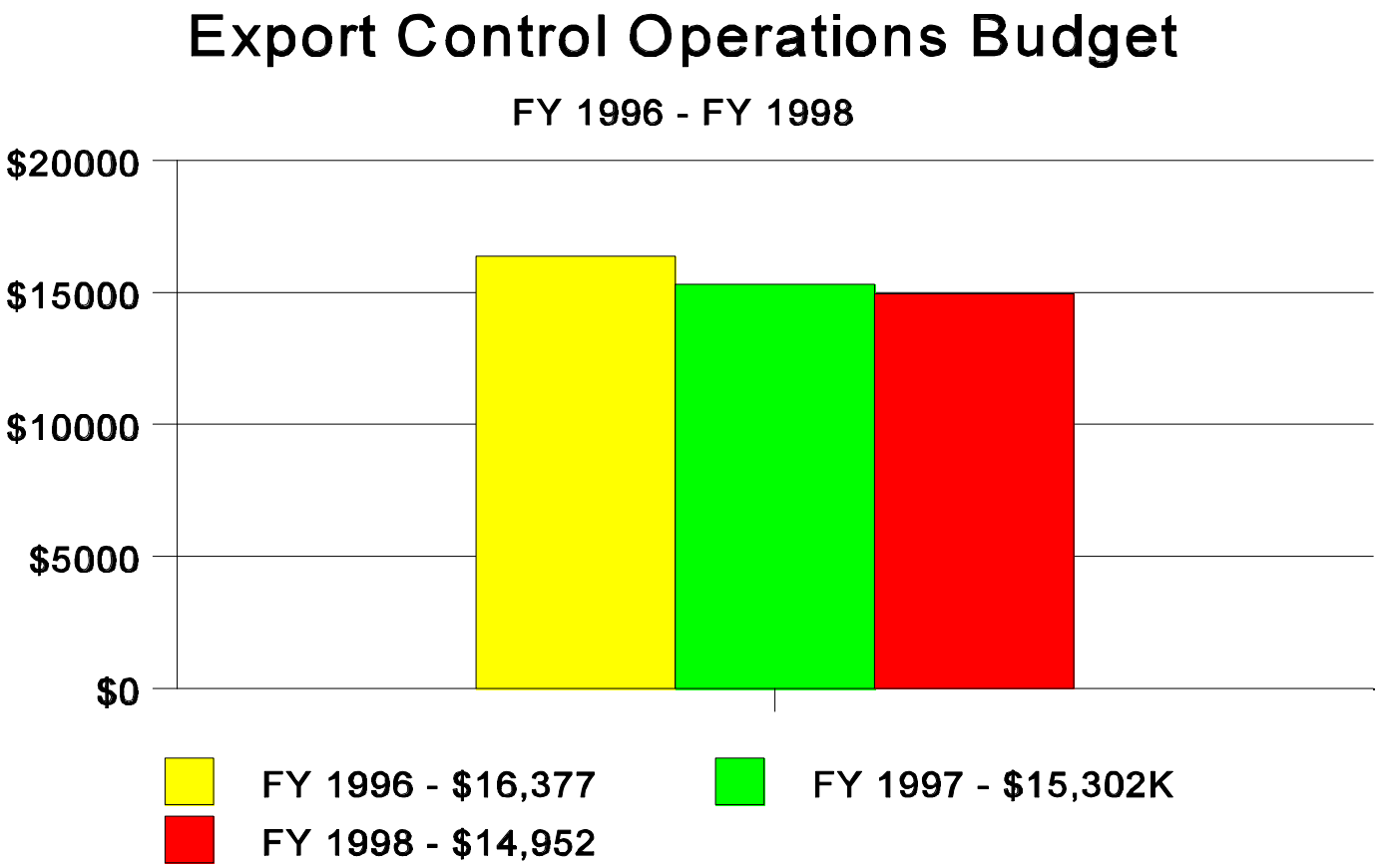
Explanation of Funding Changes FY 1997 to FY 1998:

| | | |
|---|---|---|
| **FY1997 Enacted Appropriation** | **$** | **15,302** |
| Increase in programs to curb nuclear smuggling. | | +1,000 |
| Six laboratory-to-laboratory programs recently established will not be pursued or will be implemented at a greatly reduced level. This includes three laboratory-to-laboratory programs in Russia; two in Ukraine; and one in Kazakstan. | | -940 |
| GSFP, a program designed to facilitate the development of effective export controls in the former Soviet Union, will be reduced. | | -150 |
| The FSU Dual-Use Supplier Database and related studies will not be maintained and/or conducted. | | -260 |
| **FY1998 Budget Request** | **$** | **14,952** |

# Export Control Operations - FY 1998

## Budget Breakdown




Export Control Operations Budget
FY 1996 - FY 1998
$20000
$15000
$10000
$5000
$0
FY 1996 - $16,377
FY 1997 - $15,302K
FY 1998 - $14,952

## ARMS CONTROL AND NONPROLIFERATION

## INTERNATIONAL MATERIALS PROTECTION, CONTROL, AND ACCOUNTING

I. Mission Supporting Goals and Objectives

International Materials Protection, Control, and Accounting (MPC&A) activities are designed to support cooperation under agreements established with Russia, the Newly Independent States (NIS), and the Baltics for the protection of "direct use" nuclear materials. The program focuses on key facilities and institutions that possess or process significant quantities of such nuclear weapon-usable materials that are of nonproliferation concern. The program provides expertise for planning and implementation of systems and procedures to enhance protection of such materials. These activities support the integration of nuclear materials security elements into systems that provide effective security and are maintainable and sustainable by the cooperating countries. Efforts also promote the diffusion of nuclear materials security technologies, concepts, and expertise to different types of operating facilities where systems will be implemented.

II. Funding Schedule:

| Program Activity | FY 1996 | FY 1997 | FY 1998 | $ Change | % Change |
|---|---|---|---|---|---|
| International Materials Protection, Control, & Accounting | $ 85,000 | $ 112,637 | $ 137,008 | $ +24,641 | +21.9 |
| Total, International Materials Protection, Control, & Accounting | $ 85,000 | $ 112,637 | $ 137,008 | $ +24,641 | +21.9 |

III. Performance Summary-Accomplishments:

| | **FY1996** | **FY1997** | **FY1998** |
|---|---|---|---|
| • MPC&A upgrades in the Minatom Civilian Complex including the following facilities: Elektrostal, IPPE, Dmitrovgrad, Luch, Novosibirsk, SF NIKIET and Beloyarsk NPP, Khlopin, Moscow RDIPE, Moscow ITEP, and St. Petersburg Machine Building Plant, and courses at the Russian Methodological Training Center (RMTC). | 11,501 | 33,750 | 33,750 |

| III. Performance Summary-Accomplishments: | FY1996 | FY1997 | FY1998 |
|---|---|---|---|
| • Expanded cooperation with the Russian Federal Nuclear Radiation and Safety Authority (GAN) including regulatory document development, development of a Russian federal MC&A information system, provision of MC&A equipment for inspectors, development of a GAN MPC&A information system, inspector training, and MPC&A cooperation at six GAN sites in Russia, including Gatchina (PNPI), Karpov, MEPhI, Dubna (JINR), TPU, and Norilsk, and upgrades at Kurchatov Institute. | 12,308 | 23,250 | 30,150 |
| • MPC&A cooperation in Kazakstan, Ukraine, Belarus, Uzbekistan, Latvia, Georgia, and Lithuania. | 12,366 | 3,800 | 9,604 |
| • MPC&A upgrades in the Minatom Defense Complex including Krasnoyarsk-26, Krasnoyarsk-45, Sverdlovsk-44, Eleron, Institute of Automatics, Institute of Inorganic Materials, Tomsk-7, Russian serial production plants (Avangard, Sverdlovsk-45, Penza-19, and Zlatoust-36), Chelyabinsk-70, and Mayak. | 47,779 | 36,837 | 43,504 |
| • MPC&A cooperation with the Russian Northern Fleet and Pacific Fleet, and the Murmansk Shipping Company. | 406 | 10,000 | 10,000 |
| • Transportation security enhancements for intersite shipments of nuclear materials in Russia. | 640 | 5,000 | 10,000 |
| **Total, International Materials Protection, Control, and Accounting** | **85,000** | **112,637** | **137,008** |

Explanation of Funding Changes FY 1997 to FY 1998:

| | | |
|---|---|---|
| **FY1997 Enacted Appropriation** | **$** | **112,637** |
| Increased equipment procurement and expansion of the Federal MPC&A Information System beyond the pilot project and additional upgrades at Kurchatov Institute. | | +6,900 |
| Additional upgrades in Kazakstan to implement emergent MPC&A requirements for BN-350 breeder reactor at Aqtau. | | +5,767 |
| Fund additional work at Krasnoyarsk-45; accelerate ongoing work throughout the Minatom defense complex. | | +6,704 |
| Fully implement efforts to improve MPC&A for nuclear materials during transportation. | | +5,000 |
| **FY1998 Budget Request** | **$** | **137,008** |

## ARMS CONTROL AND NONPROLIFERATION

## TREATIES AND AGREEMENTS

I. Mission Supporting Goals and Objectives

The Treaties and Agreements program supports implementation of bilateral or multilateral, Presidentially-directed or Congressionally-mandated arms control and nonproliferation initiatives, agreements and treaties. In addition, it provides for unexpected, unbudgeted responses to arms control and nonproliferation requirements of an immediate nature based on urgent U.S. national security needs, as well as preparations to meet new transparency or verification requirements arising out of ongoing negotiations that are consistent with U.S. national security and without compromising proliferation sensitive information.

II. Funding Schedule:

| Program Activity | FY 1996 | FY 1997 | FY 1998 | $ Change | % Change |
|---|---|---|---|---|---|
| Treaties and Agreements | $ 2,540 | $ 4,028 | $ 3,528 | $ -500 | -12.4 |
| Total, Treaties and Agreements | $ 2,540 | $ 4,028 | $ 3,528 | $ -500 | -12.4 |

III. Performance Summary-Accomplishments:

| | **FY1996** | **FY1997** | **FY1998** |
|---|---|---|---|
| • Support the successful negotiation, ratification and implementation of DOE responsibilities under the Comprehensive Test Ban Treat (CTBT), Chemical Weapons Convention (CWC) and Biological Weapons Convention (BWC), as well as for supporting contingency funding for unexpected requirements concerning treaty or agreement negotiations and related activities responding to urgent U.S. national Security requirements. | 1,337 | 1,000 | 1,500 |

| | | | |
|---|---|---|---|
| • Continue support for Russian and other FSU activities supporting specific agreements such as Gore/Chernomyrdin Commission agreements, the Highly Enriched Uranium Purchase Agreement, other opportunities to secure through purchase at-risk weapon-usable materials, and activities related to bilateral and trilateral excess fissile materials inspections among Russia, the International Atomic Energy Agency (IAEA), and the U.S. | 1,103 | 2,800 | 1,800 |

| III. Performance Summary-Accomplishments: | FY1996 | FY1997 | FY1998 |
|---|---|---|---|
| • Continue to provide technical support and personnel for United Nations special Commission (UNSCOM) to ensure no reinitiation of programs for weapons of mass destruction in Iraq. | 100 | 228 | 228 |
| x | | | |
| **Total, Treaties and Agreements** | **2,540** | **4,028** | **3,528** |

Explanation of Funding Changes FY 1997 to FY 1998:

| | | |
|---|---|---|
| **FY1997 Enacted Appropriation** | **$** | **4,028** |
| Reduction in DOE-developed equipment demonstrations and exercises for CTBT, emergency purchases of at-risk materials, and similar activities. | | -500 |
| **FY1998 Budget Request** | **$** | **3,528** |

## ARMS CONTROL AND NONPROLIFERATION

## INTERNATIONAL SECURITY

I. Mission Supporting Goals and Objectives:

The International Security program supports the implementation of security commitments made by the Administration regarding the Newly Independent States (NIS) of the Former Soviet Union (FSU) and the Democratic Peoples Republic of Korea (DPRK). Spent fuel activities in the DPRK include arresting the corrosion of the spent fuel from the 5MW research reactor in Nyongbyon, North Korea; and safely canning and storing spent fuel prior to its ultimate disposition in accordance with the "agreed" framework signed by the governments of the U.S. and DPRK. Initiatives for Proliferation Prevention (IPP) in the NIS and FSU was transferred from Defense Programs, Weapons Activities in FY 1996. The IPP are designed to reduce the global nuclear danger through focused, cooperative projects involving the ten major DOE laboratories and science and engineering institutes in Russia, Ukraine, Kazakstan and Belarus. Some of these projects will involve cost-share with U.S. industry. Major initiatives include preventing "brain drain" by engaging scientists, engineers, and technicians in non-weapons-related projects; motivating participation in proliferation prevention activities; facilitating continued access to NIS facilities through technical engagement with personnel; and establishing self-sustaining commercial linkage that will support future independent commercial projects and assure a Federal exit strategy.

II. Funding Schedule:

| Program Activity | FY 1996 | FY 1997 | FY 1998 | $ Change | % Change |
|---|---|---|---|---|---|
| Spent Fuel Activities | $ 7,700 | $ 7,868 | $ 4,968 | $ -2,900 | -36.9 |
| Initiatives for Proliferation Prevention | 10,000 | 29,600 | 29,600 | 0 | 0 |
| Total, International Security | $ 17,700 | $ 37,468 | $ 34,568 | $ -2,900 | -7.7 |

III. Performance Summary-Accomplishments:

| | FY1996 | FY1997 | FY1998 |
|---|---|---|---|
| Spent Fuel Activities: | | | |
| • Continue placement of spent and damaged fuel into canisters with inert gas and under IAEA seals. | 3,600 | 0 | 0 |

III. Performance Summary-Accomplishments:

FY1996 FY1997 FY1998

| | | | |
|---|---|---|---|
| • Cover increased costs for water treatment and canning caused by delay in implementation, and by unforeseen technical or political problems. | 4,100 | 0 | 0 |
| • Complete placement of spent and damaged fuel into canisters with inert gas and under IAEA seals. | 0 | 4,800 | 0 |
| • Implement long term maintenance of water treatment and fuel canning system in North Korea. This includes requirements for replacement equipment, materials consumed in maintenance; fuel for site power and heating during winter visits; and oversight visits. | 0 | 2,468 | 2,970 |
| • Technical analysis for safety concerns, of disposition opinions for, and characterization of North Korea's spent fuel. | 0 | 600 | 350 |
| • Resolve on-site problems in North Korea to maintain canister integrity and/or water clarity critical to maintaining IAEA Safeguards on North Korea's spent nuclear fuel. | 0 | 0 | 1,398 |
| • Train North Korean technical staff due to turnover on equipment. | 0 | 0 | 250 |
| **Total, Spent Fuel Activities** | **7,700** | **7,868** | **4,968** |
| Initiatives for Proliferation Prevention: | | | |
| • Create 35 cooperative, cost-shared projects aimed at creating the direct partnerships which will provide for long-term commercial employment of key scientists, engineers, and technicians. | 2,500 | 15,100 | 15,100 |
| • Carry out other IPP project and support activity to keep NIS institutes viable as stable places of peaceful employment; to engage NIS weapons scientists, engineers and technicians in peaceful, commercial activities to prevent "brain drain," facilitate broad access to NIS chemical, biological and nuclear weapons facilities; achieve close 1/1 working relationships of DOE laboratory scientists and engineeers with their NIS colleagues to promote openness and transparency; and focus on "closed cities." | 7,400 | 12,100 | 12,100 |

| III. Performance Summary-Accomplishments: | FY1996 | FY1997 | FY1998 |
|---|---|---|---|
| • Involve other agencies having similar technological interest, such as NIH, USDA, and Department of State, in a total of 5-15 IPP projects. | 0 | 1,000 | 1,000 |
| • Conduct specific projects involving technologies, the development of which supports enhanced safety, security and accountability of nuclear materials (for example, neutron emission technology to counter nuclear smuggling). | 100 | 1,400 | 1,400 |
| **Total, Initiatives for Proliferation Prevention** | **10,000** | **29,600** | **29,600** |
| **Total, International Security** | **17,700** | **37,468** | **34,568** |

Explanation of Funding Changes FY 1997 to FY 1998:

| | | |
|---|---|---|
| **FY1997 Enacted Appropriation** | **$** | **37,468** |
| Long term maintenance of water treatment and fuel canning systems in North Korea and NIS. | | +500 |
| Planning to complete placement of fuel rods in canisters in DPRK. | | -5,400 |
| Must begin planning for final disposition of DPRK's fuel in accordance with the U.S.-DPRK Agreed Framework. | | +350 |
| Anticipate unusual problems after U.S. Spent Fuel team discontinues full-time presence at the spent fuel reactor facility. | | +1,400 |
| Anticipate high turnover of North Korean technical staff experienced while U.S. team was on-site full-time to ensure proper maintenance and operation of complex equipment. | | +250 |
| **FY1998 Budget Request** | **$** | **34,568** |

**DEPARTMENT OF ENERGY**
**FY 1998/FY 1999 CONGRESSIONAL BUDGET REQUEST**
**OTHER DEFENSE ACTIVITIES**
**(Tabular dollars in thousands, Narrative in whole dollars)**

## NUCLEAR SAFEGUARDS AND SECURITY

## PROGRAM MISSION

The Nuclear Safeguards and Security Program provides effective policy, programmatic direction and training for the protection of the Department of Energy's (DOE) nuclear weapons, nuclear materials, classified information, and facilities. The program provides technology development and technical support to domestic safeguards and security activities as well as implementation of effective classified information and information control policies.

The GOAL of the Nuclear Safeguards and Security Program is to:

Support the National Security of the United States by assuring the effective, cost-efficient protection of the DOE's nuclear weapons, nuclear materials, classified information, and facilities against theft, sabotage, espionage, and terrorist activity.

The OBJECTIVES related to this goal are:

1. Strengthen support to field elements to facilitate implementation of cost-saving safeguards and security measures.

2. Develop Department-wide strategic and long-range planning for domestic nuclear safeguards and security.

3. Initiate modernization effort of safeguards and security management information systems.

4. Provide a domestic technology and systems development program to ensure the availability of state-of-the-art technical capabilities for the protection of sensitive DOE facilities, special nuclear materials, and national security interests including classified matter.

5. Ensure availability of state-of-the-art technical capabilities for accountability and control of nuclear material recovered from disassembled nuclear weapons returned from the stockpile, and storage of special nuclear materials.

6. Strengthen the role of the Safeguards and Security Central Training Academy.

7. Develop programs to support the standardization and accreditation of physical security systems.

**PROGRAM MISSION - NUCLEAR SAFEGUARDS AND SECURITY** (Cont'd)

8. Maximize public access to DOE information while protecting national security.

PERFORMANCE MEASURES:

1. Provide the necessary quantity and quality of safeguards and security training to protect domestic safeguards and security resources. This will be accomplished through the Central Training Academy which will conduct 118 training courses with approximately 176 iterations.

2. The Technology and Systems Development activities will address 47% of the backlog of documented and validated field user needs by modifying current technologies for safeguards and security applications or developing new technologies to specifically address safeguards and security deficiencies.

3. Comply with Executive Order 12958 on Classified National Security Information by issuing new procedures, training those individuals responsible for implementing these procedures, and initiating a consolidated document declassification program focused on Restricted Data/Formerly Restricted Data and National Security Information records of most interest to our customers, while continuing to protect that information which warrants classification.

SIGNIFICANT ACCOMPLISHMENTS AND PROGRAM SHIFTS:

- Comprehensive continuous review and analysis of program requirements coupled with advances in safeguards and security technologies has resulted in millions of dollars in savings and cost avoidance for the Department, i.e, development of technologies and approaches for extending and automating physical inventory activities to improve material assurance and reduce costs and radiation exposures.

- The Safeguards and Security program has been and will be the key deterrent in preventing major incidents (i.e., theft, sabotage, terrorist activity, etc.) across the complex at 16 domestic weapons sites.

- Enhanced training technology applications and applied a broader range of technologies to Departmental training, i.e., expanded use of interactive television, mobile training team, and televideo conferences to provide requisite training for a larger number of students without funding increases.

- The Declassification program has played a key role in implementing the Department's Openness Initiative by maximizing public access to Departmental information while protecting our national security posture, thus rebuilding the public's trust in the Department of Energy.

- The DOE Information Assurance program has been initiated to become the key deterrent in preventing major incidents involving the energy information infrastructure.

**Nuclear Safeguards and Security**
**Program Funding Profile**
(Dollars in Thousands)

| | FY 1996 Current Appropriation | FY 1997 Original Appropriation | FY 1997 Adjustments | FY 1997 Current Appropriation | FY 1998 Request | FY 1999 Request |
|---|---|---|---|---|---|---|
| Safeguards and Security Operational Support | $37,363 | $22,716 | $ 0 | $22,716 | $21,730 | $21,730 |
| Technology and Systems Development | 20,905 | 22,238 | 0 | 22,238 | 23,620 | 23,620 |
| Classification/Declassification | 12,789 a/ | 2,254 | 0 | 2,254 | 1,850 | 1,850 |
| Program Direction | 12,345 | 0 | 0 | 0 | 0 | 0 |
| Facilities Operations | 2,995 | | 0 | 0 | 0 | 0 |
| Subtotal, Nuclear Safeguards and Security | 86,397 | 47,208 | 0 | 47,208 | 47,200 | 47,200 |
| Adjustment | -45 b/ | 0 | 0 | 0 | 0 | 0 |
| TOTAL, Nuclear Safeguards and Security | $86,352 | $47,208 | $ 0 | $47,208 | $47,200 | $47,200 |

a/ Reflects an increase of $2,002,441 from Reprogramming 96-R-22 for the Declassification Productivity Initiative (DPI). Also reflects an increase of $1,000,000 from Reprogramming 96-R-13 for implementation of Executive Order 12958.

b/ Use of prior year balances - Reprogramming 96-R-22 for DPI.

Public Law Authorizations
P.L. 83-703, "Atomic Energy Act of 1954"
P.L. 95-242, "Nuclear Non-Proliferation Act of 1978"
P.L. 103.62, "Government Performance and Results Act of 1993"

NUCLEAR SAFEGUARDS AND SECURITY
(Dollars in thousands)

PROGRAM FUNDING BY SITE

| Field Offices/Sites | FY 1996 Current Appropriation | FY 1997 Original Appropriation | FY 1997 Adjustments | FY 1997 Current Appropriation | FY 1998 Budget Request | FY 1999 Budget Request |
|---|---|---|---|---|---|---|
| Albuquerque Operations Office | | | | | | |
| Mound Plant | $878 | $878 | $0 | $878 | $0 | $0 |
| Los Alamos National Lab | 7,576 | 7,285 | 0 | 7,285 | 8,668 | 8,668 |
| Sandia National Labs | 7,001 | 8,662 | 0 | 8,662 | 6,475 | 6,475 |
| Albuquerque Operations Office | 8,799 | 8,463 | 0 | 8,463 | 7,813 | 7,813 |
| Chicago Operations Office | | | | | | |
| Argonne National Lab (West) | 275 | 80 | 0 | 80 | 0 | 0 |
| Argonne National Lab (East) | 364 | 103 | 0 | 103 | 103 | 103 |
| Brookhaven National Lab | 494 | 450 | 0 | 450 | 725 | 725 |
| Chicago Operations Office | 1,550 | | | | | |
| New Brunswick Laboratory | 4,295 | | | | 50 | 50 |
| Idaho Operations Office | 827 | 827 | 0 | 827 | 1,097 | 1,097 |
| Nevada Operations Office | 304 | 155 | 0 | 155 | 105 | 105 |
| Oak Ridge Operations Office | | | | | | |
| Oak Ridge Operations Office | 3,176 | 2,930 | 0 | 2,930 | 2,806 | 2,806 |
| Oak Ridge Institute for Science and Education | 563 | 563 | 0 | 563 | 563 | 563 |
| Richland Operations Office | 2,282 | 2,342 | 0 | 2,342 | 2,437 | 2,437 |
| Oakland Operations Office | | | | | | |
| Lawrence Livermore National Lab | 3,618 | 4,138 | 0 | 4,138 | 6,447 | 6,447 |
| Washington Headquarters | | | | | | |
| Office of Scientific and Technical Information | 0 | 75 | 0 | 75 | 40 | 40 |
| Washington Headquarters | 44,396 | 10,257 | 0 | 10,257 | 9,871 | 9,871 |
| Subtotal | 86,397 a/ | 47,208 | 0 | 47,208 | 47,200 | 47,200 |
| Adjustment | (45) b/ | | | | | |
| TOTAL | $86,352 | $47,208 | $0 | $47,208 | $47,200 | $47,200 |

a/ Reflects an increase of $2,002,441 from Reprogramming 96-R-22 for the Declassification Productivity Initiative (DPI).
Also reflects an increase of $1,000,000 from Reprogramming 96-R-13 for implementation of Executive Order 12958.

b/ Use of prior year balances - Reprogramming 96-R-22 for DPI.

## NUCLEAR SAFEGUARDS AND SECURITY

## SAFEGUARDS AND SECURITY OPERATIONAL SUPPORT

(Dollars in Thousands)

I. Mission Supporting Goals and Objectives

Safeguards and Security Operational Support provides essential technical and analytical expertise to ensure effective and efficient security; a protective force for Headquarters operations; reviews which ensure cost-saving measures in safeguards and security throughout the Department; standardized training responsive to the challenges of the changing post-cold war era; and office automation modernization geared to a more responsive and efficient operation. This support provides for the overall improvement of safeguards and security activities.

Subprogram activities in this section of the budget include the following:

- Central Training Academy (CTA) is the Center of Excellence for safeguards and security training and training development. CTA uses both traditional and distance learning technologies to provide onsite and facility training for safeguards and security personnel ensuring that DOE maintains a well-trained workforce to protect the nation's vital nuclear and energy interests against espionage, sabotage or theft. CTA assesses safeguards and security field training needs and site training program performance and develops training courses to meet those needs. Distance Learning Training includes satellite transmission of CTA training to multiple DOE sites and, through the use of modern interactive technology, allows each student to be part of the instructional process. Computer-based training, interactive audio/video training and correspondence courses are also provided.

- Information Security provides support in the areas of classified matter protection and control, technical security, information systems security (information assurance), operation security, and foreign ownership, control or influence. Technical Surveillance Countermeasures (TSCM) ensures and enhances the security provided for DOE facilities in the greater Washington, D.C., area. The Information Security Resource Center (ISRC) incorporates technical expertise and professional development of training and issues related to information security, it provides information security research and development capability, specialized training as needed, and coordinates each information security discipline into an integrated, cohesive single program.

- Security Education Briefing and Awareness provides support for Security Education Briefing and Awareness to reflect changing policies and procedures. Coordinates and participates in security education workshops and meetings for the exchange of resources and dissemination of security education information and assists contractors in establishing supporting briefing materials.

**I. Mission Supporting Goals and Objectives - SAFEGUARDS AND SECURITY OPERATIONAL SUPPORT** (Cont'd)

- Headquarters Guard Contract provides security for the protection of Government property, classified matter, and personnel at headquarters buildings.

- Personnel Security evaluates, reviews, and develops guidance and documents for use in evaluating the Personnel Security Assurance Program (PSAP) as it relates to medical, psychological, legal, security, and management components. Researches and prepares technical documents to support the Accelerated Access Authorization Program (AAAP). Provides technical assistance and operational support to the AAAP program manager to determine current status of science and technology in the AAAP component areas.

- Additional Support provides Headquarters and field elements with support to implement cost-saving safeguards and security measures. Support includes technical assessments, vulnerability assessment support, technical and engineering assistance, surveys, performance testing, technical background on policy issues, arms control support, administrative and technical guidance in the development of computer security policy for systems possessing national security interest data (unclassified and classified), and the security alarm system at Headquarters. The Safeguards and Security Information Management System (SSIMS) tracks and reports classified safeguards and security issues from all DOE field sites.

  Supports activities in DOE to meet requirements levied by the President's Commission on Critical Infrastructure Security as delineated in the Presidential Decision Directive on countering terrorism and the Executive Order 13010 on Critical Infrastructure Protection. Will provide support to assess vulnerabilities and threats to key assets owned or operated by DOE including power systems, petroleum reserves, nuclear facilities, and other assets; guidance on methods to detect, prevent, halt, or confine an attack to critical infrastructures, and on methods to recover and restore service; and training and education on methods of reducing vulnerabilities and responding to attacks on critical infrastructures. Conduct after-action analysis to determine possible future threats targets or methods of attack.

II. Funding Schedule:

| Program Activity | FY 1996 | FY 1997 | FY 1998 | $ Change | % Change | FY 1999 |
|---|---|---|---|---|---|---|
| New Brunswick Laboratory | $ 4,088 | $ 0 | $ 0 | $ 0 | $ 0 | $ 0 |
| Central Training Academy (CTA) | 8,736 | 8,463 | 7,813 | (650) | (8%) | 7,813 |
| Information Security | 1,152 | 1,152 | 1,152 | 0 | 0 | 1,152 |
| Security Education Briefing and Awareness | 181 | 181 | 181 | 0 | 0 | 181 |
| Headquarters Guard Contract | 8,629 | 8,500 | 7,000 | (1,500) | (18%) | 7,000 |
| Personnel Security | 485 | 485 | 485 | 0 | 0 | 485 |
| Additional Support | 14,092 | 3,935 | 5,099 | 1,164 | 30% | 5,099 |
| Total, Safeguards and Security Operational Support | $37,363 | $22,716 | $21,730 | $ (986) | (4%) | $21,730 |

| III. Performance Summary - Accomplishments: | FY 1996 | FY 1997 | FY 1998 | FY 1999 |
|---|---|---|---|---|
| **New Brunswick Laboratory** | | | | |
| • In **FY 1996**, developed technology to assist facilities to meet performance criteria; maintain state-of-the-art measurement capability for nuclear materials as necessary to support mission requirements; and provide measurements supporting domestic and international safeguards. Provide and supply Certified Reference Materials to meet the calibration needs of the nuclear community; assure collaboration with the European Community's Institute for Reference Materials and Measurements to develop international nuclear reference materials embodying the new "one material, one value, joint certificates" concept; and continue development and issuance of nondestructive assay waste standards and serve as Certifying Authority for U.S. nuclear reference materials. Beginning in **FY 1997**, funding for NBL is provided for in the Nonproliferation and National Security Program Direction decision unit. | 4,088 | 0 | 0 | 0 |
| **Central Training Academy - Total** | **8,736** | **8,463** | **7,813** | **7,813** |
| • In **FY 1996** conducted 115 courses with 180 classroom iterations. In **FY 1997**, we estimate that 124 courses will be conducted with 180 classroom iterations, providing training for a community of approximately 5,000 protective force members to ensure adequate protection of nuclear materials, classified information, and nuclear facilities. In **FY 1998**, we will continue emphasis on "On-line Training;" therefore being able to offer approximately 118 courses with 176 classroom iterations. These courses will cover key S&S program areas (i.e., information security, material control and accountability, etc.) for approximately 5,000 protective force members. | 8,736 | 8,400 | 7,750 | 7,750 |
| • In **FY 1997** and **FY 1998** provide funding to support the CTA's equipment-related needs such as LAN servers, copy machine, and limited distance learning equipment such as a distance learning remote control TV camera. | 0 | 63 | 63 | 63 |

| III. Performance Summary - Accomplishments: (Cont'd) | FY 1996 | FY 1997 | FY 1998 | FY 1999 |
|---|---|---|---|---|
| **Information Security** | 1,152 | 1,152 | 1,152 | 1,152 |
| • The Information Security Resource Center, in **FY 1996**, provided program and technical support in the areas of Information Security, Facility Surveys and Approvals, and Foreign Ownership, Control or Influence. Researched the growing information assurance issue, as it applies to DOE's information infrastructure, and began to develop conceptual guidelines in dealing with this emerging threat and security issue. Using advanced information visualization technologies, identified, categorized, and characterized DOE security threats and vulnerabilities. Provided technical advice and assistance, and innovative implementation techniques to the field. In **FY 1997** and **FY 1998** continue to maturate the Department's information assurance capabilities, threat awareness, and implementation guidance. Assist in an aggressive approach to the growing issue of unauthorized disclosures and compromises of classified information caused, in part, due to the proliferation of communication modes, i.e., the Internet. Support the Department's goal of developing improved, effective and efficient security policies consistent with national standards and sound risk management principles. | | | | |
| **Security Education Briefing and Awareness** | | | | |
| • In **FY 1996** upgraded security education requirements by implementing changes specified in the National Industrial Security Plan (NISP) of January 1995 and Executive Order 12958 of April 1995. In **FY 1997** and **FY 1998**, through education programs, provide security awareness through out the DOE complex. | 181 | 181 | 181 | 181 |
| **Headquarters Guard Contract** | | | | |
| • **FY 1996** was the first full year of operation of the new protective force contract. Implement a Supervisor Certification Program to improve the quality of protective force supervision and an Award Fee Process designed to improve protective force performance. **FY 1997** maintains the protective force contract ensuring that a sound protection program is offered to Headquarters employees and facilities. | 8,629 | 8,500 | | |

| III. Performance Summary - Accomplishments: (Cont'd) | FY 1996 | FY 1997 | FY 1998 | FY 1999 |
|---|---|---|---|---|
| **Headquarters Guard Contract (Cont'd)** | | | | |
| • **FY 1998** is the first year to realize the full impact of the building consolidation and strategic plan, based on the Secretary's Openness Initiative and review of the Strategic Alignment Initiative, for forecasted reduction and downsizing. This will permit the protective force contract to be executed at a lower level of cost. Cost savings resulting from this lower level of funding were redirected to higher priority program needs. This redirected funding will support the requirements levied on DOE by the President's Commission on Critical Infrastructure Security as outlined in the Presidential Decision Directive on countering terrorism and the Executive Order on Critical Infrastructure Protection which is discussed under Additional Support activities. | | | 7,000 | 7,000 |
| **Personnel Security** | 485 | 485 | 485 | 485 |
| • In **FY 1996** expanded the Personnel Security Assurance Program (PSAP) telecommunications network through the electronic bulletin board system that will be made available to DOE and DOE contractor personnel. In **FY 1997** and **FY 1998**, maintain operation of the Center for Human Reliability Studies by providing support for the PSAP through guidance and product development; expert technical advice and assistance; updating and revising of PSAP materials; and as technical liaison with Department of Defense Personnel Security Research Center (PERSEREC), Department of Defense Security Institute, Department of Defense Polygraph Institute, and other similar agencies and institutions. | | | | |
| **Additional Support - Total** | **14,092** | **3,935** | **5,099** | **5,099** |
| • In **FY 1996**, provided a contractor staff of technical expertise and administrative know-how to meet changing program requirements while making use of private sector capabilities without interfacing with inherently government functions. Beginning in **FY 1997**, funding for this activity is provided for in the Nonproliferation and National Security Program Direction decision unit. | 7,238 | 0 | 0 | 0 |

| III. Performance Summary - Accomplishments: (Cont'd) | FY 1996 | FY 1997 | FY 1998 | FY 1999 |
|---|---|---|---|---|
| **Additional Support (Cont'd)** | | | | |
| • Supported 21 federal full-time equivalent (FTEs) at the Chicago Operations Office. Beginning in **FY 1997**, funding for these FTEs is provided for in the Nonproliferation and National Security Program Direction decision unit. | 1,550 | 0 | 0 | 0 |
| • In **FY 1996**, provided support for HQ LAN and AOSS requirements, HQ Technical/Information Security, and HQ computer security support. In **FY 1997**, funding to support these activities is provided for in the Nonproliferation and National Security Program Direction decision unit. | 1,956 | 0 | 0 | 0 |
| • In **FY 1996**, performed line item construction project reviews and technical assessments, ensuring continued resource optimization in the DOE complex; assist field sites in treaty inspection/vulnerability assessments; and streamline the Site S&S/Master S&S Agreement (SSSP/MSSA) verification/validation process. Revise, update, and consolidate S&S orders and policy and develop training and field assistance guidance that will cost effectively meet Departmental goals and objectives. Maintain the support for these efforts in **FY 1997** and **FY 1998**, providing other technical assistance and engineering assistance to field sites in the implementation of safeguards and security measures. | 1,936 | 2,050 | 2,000 | 2,000 |
| • In **FY 1996**, completed enhancements to Germantown security access control system (i.e., installation of additional glass doors on third floor to expand the secure area, installation of card readers, and purchase of badging system equipment) and the HQ alarm system; complete training in support of the HQ protective force radio system; and continued integrating HQ badging system and access control systems with the DISS. In **FY 1997**, provide modifications to Headquarters alarm system; integrate the Headquarters badging system and access control system with other Headquarters personnel data bases; and maintain the Headquarters protective force radio system at a 98% operational level. In **FY 1998**, provide engineering support, minor enhancements, and modifications to Headquarters alarm and automated access control systems; and maintain the Headquarters protective force radio system at a 90% operational level. | 1,062 | 803 | 803 | 803 |

| III. Performance Summary - Accomplishments: (Cont'd) | FY 1996 | FY 1997 | FY 1998 | FY 1999 |
|---|---|---|---|---|
| **Additional Support (Cont'd)** | | | | |
| • In **FY 1996**, provided support for S&S Information Management System (SSIMS) activities by maintaining a data base information system detailing facility findings, ratings and general operational status; assisting in technical performance review of system software; providing training support for data base users; and providing additional system and development support as requested. In addition to maintaining this support in **FY 1997** and **FY 1998**, implement a revision that will enhance reporting and trend analysis capabilities. | 350 | 300 | 300 | 300 |
| • In **FY 1998,** initiate activities in DOE in support of requirements levied by the President's Commission on Critical Infrastructure Security as delineated in the Presidential Decision Directive on countering terrorism and the Executive Order 13010 on Critical Infrastructure Protection. Provide support to assess vulnerabilities and threats to key assets owned or operated by DOE including power systems, petroleum reserves, nuclear facilities, and other assets. Provide guidance on methods to detect, prevent, halt, or confine an attack to critical infrastructures, and on methods to recover and restore service. Provide training and education on methods of reducing vulnerabilities and responding to attacks on critical infrastructures. Conduct after action analysis to determine possible future threats targets or methods of attack. | 0 | 0 | 1,500 | 1,500 |
| • In **FY 1997** provide support to Headquarters for capitalized computer equipment requirements and modification and/or replacement of parts to the Headquarters alarm and access control system. In **FY 1998** maintain support to Headquarters for computer requirements and modify/replace parts to critical, mission-essential, subsystems of the alarm and access control system on a priority basis. General building alarm and access control subsystems will be maintained at a reduced level of effort. | 0 | 782 | 496 | 496 |

**NUCLEAR SAFEGUARDS AND SECURITY**
**OPERATIONAL SUPPORT**

EXPLANATION OF FUNDING CHANGES FROM FY 1997 TO FY 1998:

| | |
|---|---|
| **Central Training Academy**: | $ -650,000 |
| Eliminates several course offerings and iterations and reduces support to facilities and infrastructure maintenance. | |
| **Headquarters Guard Contract**: | -1,500,000 |
| Reflects anticipated cost savings on the protective force contract resulting from building consolidation and the strategic plan. | |
| **Additional Support**: | |
| Initiate activities in support of Executive Order 13010 on Critical Infrastructure Protection. | +1,500,000 |
| Reflects reduction in equipment purchases and development of training and field assistance guidance. | -336,000 |
| Total Funding Change, Operational Support | $ -986,000 |

## NUCLEAR SAFEGUARDS AND SECURITY

## TECHNOLOGY AND SYSTEMS DEVELOPMENT

(Dollars in Thousands)

I. Mission Supporting Goals and Objectives

The Technology and Systems Development program's mission is to develop new or modify existing technologies to protect DOE facilities, nuclear materials and national security interest information from existing and evolving threats such as insiders and terrorists. The program is formulated to address documented user requirements within the DOE complex and to meet Headquarters policy needs. The program will be able to address approximately 47% of these documented user needs.

The Technology and Systems Development program is divided into the following subprograms:

- Science and Technology Development Projects includes all activities ranging from basic research to full scale development and site implementation of a technology or system that will address a safeguards and security deficiency.

- Technology Application and Transfer Projects includes activities necessary to modify a proven technology for safeguards and security applications.

- Technology Support, Assistance, and Consultation Tasks includes technical training, technical support to Headquarters, technical workshops and seminars, and technical support and assistance to the DOE complex.

Each subprogram is concentrated in the following disciplines:

- Physical Security: Activities are focused in detection; access control; control and display; assessment; barrier/delay; and personnel subsystems.

- Material Control and Accounting: Efforts are focused in nuclear material measurements; material accounting; material control; training; and statistical methods.

- Information Security: Projects are focused on advice and assessment; education and awareness; incident response; tools and technology; and integration and assurance.

| II. Funding Schedule<br>Program Activity | FY 1996 | FY 1997 | FY 1998 | $ Change | % Change | FY 1999 |
|---|---|---|---|---|---|---|
| Science and Technology Development Projects | $15,713 | $17,558 | $17,975 | $ 417 | 2% | $17,975 |
| Technology Application and Transfer Projects | 1,882 | 1,410 | 2,523 | 1,113 | 79% | 2,523 |
| Technology Support, Assistance and Consultation | 3,310 | 3,270 | 3,122 | (148) | (5%) | 3,122 |
| Total, Technology and Systems Development | $20,905 | $22,238 | $23,620 | $1,382 | 6% | $23,620 |
| **Crosswalk of Disciplines** | | | | | | |
| Physical Security | $ 7,738 | $ 8,369 | $ 7,419 | $ (950) | (11%) | $ 7,419 |
| Material Control and Accountability | 10,114 | 10,514 | 10,296 | (218) | (2%) | 10,296 |
| Information Security | 3,053 | 3,355 | 5,905 | 2,550 | 76% | 5,905 |
| Total | $20,905 | $22,238 | $23,620 | $1,382 | 6% | $23,620 |

| III. Performance Summary - Accomplishments: | FY 1996 | FY 1997 | FY 1998 | FY 1999 |
|---|---|---|---|---|
| **TECHNOLOGY DEVELOPMENT PROGRAM** | | | | |
| **Physical Security (Total)** | **7,738** | **8,369** | **7,419** | **7,419** |
| Detection<br>• Early detection of unauthorized activities at DOE facilities is critical for preventing possible theft or loss of special nuclear materials and weapons and to minimize the impacts of possible nuclear sabotage to the Department. Unique sensors that are unknown to the outsider are necessary so that they cannot be manipulated and bypassed. Efforts have increased on developing sophisticated sensors to provide increased security of critical assets through more accurate event detection, reduced vulnerabilities, and decreased false alarm rates. Automated testing procedures for sensors are also being developed to validate their performance to increase performance reliability and decrease associated manpower costs with manually testing the sensors. These activities are primarily conducted at Sandia National Laboratories, Albuquerque, NM and Lawrence Livermore National Laboratories, CA. | 2,122 | 2,211 | 1,938 | 1,938 |
| Access Control<br>• The need exists to maintain proper security, but permit efficient entry and exit to DOE facilities without such requirements as passing paper clearances or processing through a guard. Those requirements are very expensive because they are time consuming and manpower intensive. OSS is developing automated access control technologies, such as biometric devices and a vehicle screening portal to automatically detect individuals or nuclear materials hidden in a vehicle. These technologies will ensure only authorized individuals are permitted into secure areas and eliminate the requirement for personnel to verify their identity to a guard. A computerized system that will automatically transfer clearance information via an individuals badge is being finalized and will eliminate the need to maintain an office to manually transfer clearance information and issue a visitor's badge. These activities are primarily conducted at Sandia National Laboratories, Albuquerque, NM and Lawrence Livermore National Laboratories, Livermore, CA. | 1,987 | 1,660 | 2,244 | 2,244 |

| III. Performance Summary - Accomplishments: (Cont'd) | FY 1996 | FY 1997 | FY 1998 | FY 1999 |
|---|---|---|---|---|
| **Physical Security (Cont'd)** | | | | |
| Assessment | | | | |
| • Complete the development of a prototype system to automatically assess the output of security systems to determine what type of alarm, if any, should be sent to notify personnel of anomalies. This system can be implemented into existing intrusion detection systems throughout the DOE complex to provide increased security and reduced false alarm rates. This activity will be completed in FY 1997 and is conducted at Sandia National Laboratory, Albuquerque, NM. | 320 | 300 | 0 | 0 |
| Barrier/Delay | | | | |
| • This area of the program is concerned with developing various technologies that would disable or significantly delay someone attempting to penetrate a security system. Activities include understanding current adversary attack methods and developing advanced access delay capabilities to prevent unauthorized use of an area or object or mitigate the effects from an attack. Focus is on less than lethal applications within DOE due to ease of use, demonstrated effectiveness, deployment flexibility, and integration into existing security/delay systems. These activities are primarily conducted at Sandia National Laboratory, Albuquerque, NM and Lawrence Livermore National Laboratory, CA. | 705 | 615 | 634 | 634 |

| III. Performance Summary - Accomplishments: (Cont'd) | FY 1996 | FY 1997 | FY 1998 | FY 1999 |
|---|---|---|---|---|
| **Physical Security (Cont'd)** | | | | |
| Integrated Systems<br>• The integration of security system components provides enhanced security through the ability of each component to analyze the output of one system and respond accordingly. Efforts include developing advanced integrated security systems that can be incorporated into existing security systems, easily modified, and field deployable. Security system testing standards will be developed and the performance of existing security products will be certified. New technologies and products will be evaluated to determine their feasibility for reducing the risks, costs, or improving security to the Department. A rapid deployment security system prototype that provides intrusion detection, assessment, and delay capabilities, is easy to install and setup, can be rapidly deployable and is reusable will be completed in FY 1997. A completed system could be utilized not only by DOE, but by other federal agencies that require short-term security at a low cost. These activities are primarily conducted at Sandia National Laboratories, Albuquerque, NM and Lawrence Livermore National Laboratories, CA. | 2,079 | 2,340 | 1,959 | 1,959 |
| Personnel Subsystems<br>• Efforts in this area are concentrated on developing technologies and training to aid protective force personnel to more effectively perform their functions. Current developments include: replacement ammunition for standard shotguns and small arms, a thermally controlled protective vest, and an advanced training simulator. These activities are primarily conducted at Lockheed Martin Energy Systems, Oak Ridge, TN | 525 | 555 | 256 | 256 |
| Equipment<br>• In **FY 1997** funding will support physical security equipment such as a portable intrusion detection system to deploy to remote sites to prevent unauthorized entry into a facility. In **FY 1998** funding will be used to purchase computer networking hardware and software. This equipment will be used to allow technology development projects to be completed in the physical security areas of detection, access control, access delay, and integrated systems. | 0 | 688 | 388 | 388 |

| III. Performance Summary - Accomplishments: (Cont'd) | FY 1996 | FY 1997 | FY 1998 | FY 1999 |
|---|---|---|---|---|
| **Material Control and Accounting (Total)** | **10,114** | **10,514** | **10,296** | **10,296** |
| Measurements | | | | |
| • The Department is developing and improving upon nondestructive assay measurement capabilities so that it may obtain quantifiable values for new material types and provide accurate and precise measurement values for existing materials. Software and engineering improvements are also being made to reduce the required measurement time, thus decreasing operating costs and radiation exposure to personnel. Nondestructive assay standards will also be developed for the complex to prevent each site from developing their own. These improvements will help ensure the DOE nuclear material inventory is 100% accountable, reduce the threat of theft or diversion of nuclear materials, and decrease operating costs. Current technologies to detect explosives, special nuclear materials, and shielded materials hidden in packages are antiquated and are not reliable for detecting certain shielded items. In **FY 1998** an active interrogation package monitor and enhanced portal monitors will be developed to detect shielded nuclear materials to prevent unauthorized entrance/exit of such materials into a country, plane, building, etc. These activities are primarily conducted at Los Alamos National Laboratories, NM, Brookhaven National Laboratories, Upton, NY, Lockheed Martin Energy Systems, Oak Ridge, TN, and Lawrence Livermore National Laboratory, Livermore, CA. | 4,865 | 5,007 | 6,137 | 6,137 |

| III. Performance Summary - Accomplishments: (Cont'd) | FY 1996 | FY 1997 | FY 1998 | FY 1999 |
|---|---|---|---|---|
| **Material Control and Accounting (Cont'd)** | | | | |
| Material Accounting | | | | |
| • An accurate inventory of all the Department's nuclear materials is essential to ensure that all of the materials are properly protected and accounted for. OSS has developed and implemented a cost-effective, modern automated standardized material accountability system. This system will ultimately have the capability to directly receive measurement data from the instrument, rather than manually entering the information, thus preventing operator error or possible manipulation of the data from the insider. This standardized system is expected to save each site $.5 million in software development costs. The core system will be completed in FY 1997 and implemented throughout FY 1997 and FY 1998. Expert systems and other technologies to automatically detect anomalies in material accounting databases are also being developed to provide near real-time notification of unusual activities. These activities are primarily conducted at Los Alamos National Laboratories, Los Alamos, NM. | 1,400 | 1,200 | 975 | 975 |
| Material Control | | | | |
| • As the Department continues to dismantle weapons, decommission and decontaminate its facilities, and place materials in long-term storage, a need exists to develop automated technologies, such as storage vaults with attribute and weight sensors that will alarm if materials are altered, to provide the data necessary for reliable confirmation of special nuclear materials in storage. These technologies confirm the presence of materials and extend the requirement to conduct physical inventories, thus reducing operating costs and human intervention with the materials and the possibility of theft or diversion. These activities are primarily conducted at Los Alamos National Laboratories, and Lockheed Martin Energy Systems, Oak Ridge, TN. | 1,144 | 850 | 1,025 | 1,025 |

| III. Performance Summary - Accomplishments: (Cont'd) | FY 1996 | FY 1997 | FY 1998 | FY 1999 |
|---|---|---|---|---|
| **Material Control and Accounting (Cont'd)** | | | | |
| Training | | | | |
| • Develop and conduct advanced technical material control and accountability (MC&A) training seminars to preserve MC&A competency and control over nuclear materials in all DOE facilities. Proper training is required to ensure materials are properly measured, protected, and accounted for. Lack of technical training could aid in the theft of materials or environmental hazards to the Department. Training activities are primarily conducted at Los Alamos National Laboratories. | 865 | 875 | 800 | 800 |
| Integrated Systems | | | | |
| • Develop integrated safeguards systems that provide the Department with comprehensive security at reduced lifecycle costs. Activities include testing, evaluating, and providing feedback to commercial vendors on their products to ensure that DOE needs are being addressed and state-of-the art equipment is available. Technical support and transfer of safeguards technologies to DOE facilities, other federal agencies, and foreign countries will also be provided. The decrease in funds in FY 1998 is due to the completion of a personnel and material monitoring system that will automatically monitor the location of personnel and confirm that nuclear materials have not been altered or removed. These activities are primarily conducted at Los Alamos National Laboratory, Los Alamos, NM and Sandia National Laboratory, Albuquerque, NM. | 1,840 | 1,850 | 995 | 995 |
| Equipment | 0 | 732 | 364 | 364 |
| • In **FY 1997** funding will support nondestructive assay instrumentation such as an isotopic analysis system to provide more precise measurements and accountability of special nuclear materials. In **FY 1998**, funding will purchase computer hardware and software. This equipment will be used in developing and integrating material control and accountability technologies to ensure the Department's special nuclear materials are accurately measured, fully accounted for, and properly protected. | | | | |

| III. Performance Summary - Accomplishments: (Cont'd) | FY 1996 | FY 1997 | FY 1998 | FY 1999 |
|---|---|---|---|---|
| **Information Security (Total)** | **3,053** | **3,355** | **5,905** | **5,905** |
| Tools and Technology | | | | |
| • OSS is responsible for protecting the information assets of the Department. This is becoming an increasing challenge due to the increased dependence on information systems and the growing sophistication of computer users who could gain access to this information. Automated tools and technologies will be developed to evaluate vulnerabilities of automated information systems and a database of all known vulnerabilities will be maintained. Technologies to provide real-time detection of attacks on computer systems and the appropriate response capabilities will be provided, including a multi-host assessment capability. A secure network will be developed that allows both classified and unclassified information to be processed on the same network without permitting unauthorized access to the classified information. These activities are primarily conducted at Los Alamos National Laboratories, Lockheed Martin Energy Systems, Oak Ridge, TN, and Lawrence Livermore National Laboratory, Livermore, CA. | 1,673 | 1,945 | 1,900 | 1,900 |
| Integration and Assurance | | | | |
| • Develop an integrated system that will provide real-time detection, assessment and response that can be deployed on a computer network to detect unauthorized activities that are detrimental to the information on the network or the continued operation of network resources and to respond to the unauthorized activities in a way that stops, isolates, or ejects the activity. Efforts will be heavily concentrated in FY 1998 to complete this system. This system will significantly improve the detection of unauthorized activities and reduce personnel costs now required by DOE policy to monitor and analyze activities in a computer network. These activities are primarily conducted at Los Alamos National Laboratories, Los Alamos, NM, Sandia National Laboratory, Albuquerque, NM, and Lawrence Livermore National Laboratory, Livermore, CA. | 420 | 250 | 2,800 | 2,800 |

| III. Performance Summary - Accomplishments (Cont'd) | FY 1996 | FY 1997 | FY 1998 | FY 1999 |
|---|---|---|---|---|
| **Information Security (Cont'd)** | 316 | 250 | 300 | 300 |
| Advice and Assistance<br>• Develop and provide a structured process that can be applied to evaluate the design or implementation of computers and computer networks according as defined by DOE Order 5639.681 and Manual 471.2 to implement national security policy requirements to review classified computer systems. This will provide the Department with improved site information systems protection programs at reduced computer security costs by leveraging existing penetration testing resources. These activities are primarily conducted at Los Alamos National Laboratories, Los Alamos, NM. | | | | |
| Education and Awareness<br>• Develop and conduct training courses for DOE personnel and contractors on latest computer technologies and the changing threats and vulnerabilities with computer systems. Up-to-date training is essential to ensuring that DOE sites are aware of current technologies and vulnerabilities and to provide the Department with the best mechanism to protect its information assets. Training activities are primarily performed at Lockheed Martin Energy System, Oak Ridge, TN. | 200 | 275 | 270 | 270 |
| Incident Response<br>• The computer incident advisory capability (CIAC) is an effective force for computer incident handling and prevention in the DOE community. CIAC is responsible for providing the Department with timely computer security information and continuous response to DOE computer security incidents such as network-based intrusions, virus attacks, and suspicious activities on computer networks. CIAC also provides computer security awareness, training, and workshops. The CIAC team is located at Livermore National Laboratory, Livermore, CA. | 444 | 450 | 450 | 450 |

| III. Performance Summary - Accomplishments: (Cont'd) | FY 1996 | FY 1997 | FY 1998 | FY 1999 |
|---|---|---|---|---|
| **Information Security (Cont'd)** | | | | |
| Equipment | 0 | 185 | 185 | 185 |
| • In **FY 1997** and **FY 1998**, funding supports computer software and hardware, including upgrades to existing systems, that will ensure that the latest computer technology available is incorporated into technology development projects aimed at protecting the Department's information assets. | | | | |

## NUCLEAR SAFEGUARDS AND SECURITY
## TECHNOLOGY AND SYSTEMS DEVELOPMENT

EXPLANATION OF FUNDING CHANGES FROM FY 1997 TO FY 1998:

| | |
|---|---|
| **Physical Security**:<br>Completed projects in technologies on assessment and integrated systems. | $ -950,000 |
| **Material Control and Accountability**:<br>Completed projects in technologies on material accounting. | -218,000 |
| **Information Security**:<br>Provide increased emphasis on computer security technology development activities in the area of information assurance. Specifically, complete development of a deployable integrated system that will provide real-time detection, assessment, and response to unauthorized activities on a computer network. | +2,550,000 |
| Total Funding Change, Technology and Systems Development | $+1,382,000 |

## NUCLEAR SAFEGUARDS AND SECURITY

## CLASSIFICATION/DECLASSIFICATION

(Dollars in Thousands)

I. Mission Supporting Goals and Objectives

The majority of the Classification/Declassification program is now funded in the Nonproliferation and National Security Program Direction budget. The portion of the Classification/Declassification program funded here is primarily provided by Management and Operating (M&O) contractors in the field in support of the ongoing base program as well as support of the declassification initiative. The ongoing base classification program includes the routine review and development of classification guidance. The declassification initiative includes the accelerated review of technical classification guidance to implement fundamental review recommendations and development of advanced technologies to improve the efficiency and productivity of the document declassification review process.

II. Funding Schedule:

| Program Activity | FY 1996 | FY 1997 | FY 1998 | $ Change | % Change | FY 1999 |
|---|---|---|---|---|---|---|
| Classification/Declassification | $12,789 a/ | $ 2,254 | $ 1,850 | $(404) | (18%) | $ 1,850 |
| Total, Classification/ Declassification | $12,789 | $ 2,254 | $ 1,850 | $(404) | (18%) | $ 1,850 |

a/ Reflects an increase of $2,002,441 from Reprogramming 96-R-22 for the Declassification Productivity Initiative (DPI). Also reflects an increase of $1,000,000 from Reprogramming 96-R-13 for implementation of Executive Order 12958.

| III. Performance Summary - Accomplishments: | FY 1996 | FY 1997 | FY 1998 | FY 1999 |
|---|---|---|---|---|
| **Classification/Declassification - Total** | **$12,789** | **$2,254** | **$1,850** | **$1,850** |
| • In **FY 1996**, complete the fundamental review of DOE's classification policies and submit recommendations for changes to the Secretary for approval. In **FY 1997**, complete interagency coordination and initiate the multiyear effort to develop specific classification guidance to implement those fundamental review recommendations approved by the Secretary. In **FY 1998**, continue effort to develop specific classification guidance to implement those fundamental review recommendations approved by the Secretary. Anticipated partial completion of this effort has allowed for the redirection of funding from the Declassification programmatic funding to the Nonproliferation and National Security Program Direction decision unit/support service contract to provide support for the continued review and update of technical classification guidance. This work is primarily performed at the Los Alamos National Laboratory and Sandia National Laboratories, Albuquerque, NM, and the Lawrence Livermore National Laboratory, CA. | 700 | 1,479 | 1,225 | 1,225 |
| • In **FY 1996**, enhanced early automated sensitive information recognition prototypes, established applied research and development efforts to improve key core technologies, and continued interagency cooperative efforts for technology sharing and standards development. Beginning in **FY 1997**, a major portion of the support for the Declassification Productivity Initiative will be funded in the Nonproliferation and National Security Program Direction decision unit; however, the program will proceed with development of advanced automation which supports the Declassification Productivity Initiative. In **FY 1998**, integrate developed prototype declassification technology into a single system, test and evaluate system, and refine and enhance Declassification Productivity Initiative systems to improve the productivity and accuracy of the declassification process. This work is primarily performed at the Los Alamos National Laboratory and Sandia National Laboratories, Albuquerque, NM, and the Lawrence Livermore National Laboratory, CA. | 1,560 | 775 | 625 | 625 |

| III. Performance Summary - Accomplishments: (Cont'd) | FY 1996 | FY 1997 | FY 1998 | FY 1999 |
|---|---|---|---|---|
| • In **FY 1996**, implement Executive Order 12958 on Classified National Security Information requirements. Beginning in **FY 1997**, all support for Executive Order 12958 will be funded in the Nonproliferation and National Security Program Direction decision unit. | 1,550 | 0 | 0 | 0 |
| • In **FY 1996** implement Atomic Energy Act covering RD and FRD. Beginning in **FY 1997**, support for this activity will be funded in the Nonproliferation and National Security Program Direction decision unit. | 8,979 | 0 | 0 | 0 |

## NUCLEAR SAFEGUARDS AND SECURITY
## CLASSIFICATION/DECLASSIFICATION

EXPLANATION OF FUNDING CHANGES FROM FY 1997 TO FY 1998:

| | |
|---|---|
| **Classification/Declassification**: | $-404,000 |
| Anticipated completion of development of classification guidance to implement fundamental review recommendations approved by the Secretary. | |

**NUCLEAR SAFEGUARDS AND SECURITY**
**PROGRAM DIRECTION**
(Dollars in Thousands)

I. Mission Supporting Goals and Objectives:

The Program Direction activity provides funds for salaries, benefits, travel, training, and other related costs for the Nuclear Safeguards and Security as well as the Security Investigations decision unit.

II. Funding Schedule:

| Program Activity | FY 1996 | FY 1997 | FY 1998 | $ Change | % Change | FY 1999 |
|---|---|---|---|---|---|---|
| Program Direction | $12,345 | $ 0 | $ 0 | $ 0 | 0% | $ 0 |
| Total, Program Direction | $12,345 | $ 0 | $ 0 | $ 0 | 0% | $ 0 |

III. Performance Summary - Accomplishments:

| | FY 1996 | FY 1997 | FY 1998 | FY 1999 |
|---|---|---|---|---|
| • In **FY 1996** provided support for 145 Headquarters FTEs that supported the Office of the Director, Security Affairs; Office of Nonproliferation and National Security support staff to Security Affairs; Office of Safeguards and Security; Office of Declassification; and the Central Training Academy. Beginning in **FY 1997** all support for Program Direction will be funded in the Nonproliferation and National Security Program Direction decision unit. | $12,345 | 0 | 0 | 0 |

## NUCLEAR SAFEGUARDS AND SECURITY

## FACILITIES OPERATIONS

(Dollars in Thousands)

I. Mission Supporting Goals and Objectives:

Facility operations funds capital equipment to support the Nuclear Safeguards and Security mission in the field offices and at Headquarters.

II. Funding Schedule:

| Program Activity | FY 1996 | FY 1997 | FY 1998 | % Change | FY 1999 |
|---|---|---|---|---|---|
| Capital Equipment | $ 2,995 | $ 0 | $ 0 | 0 | $ 0 |
| Facilities Operations | $ 2,995 | $ 0 | $ 0 | 0 | $ 0 |

| III. Performance Summary - Accomplishments: | FY 1996 | FY 1997 | FY 1998 | FY 1999 |
|---|---|---|---|---|
| • In **FY 1996** provided support to field offices for operations and technology development equipment requirements consistent with level of funding for technology development. Provide support to to Headquarters for capitalized computer equipment requirements. Complete procurement and installation of Headquarters Protective Force Radio System. Beginning in **FY 1997** funding for equipment requirements is included in the program dollars of the Nuclear Safeguards and Security program areas they support. | $2,995 | $ 0 | $ 0 | $ 0 |

## NUCLEAR SAFEGUARDS AND SECURITY

## CAPITAL OPERATING AND CONSTRUCTION SUMMARY

(Dollars in Thousands)

| Capital Operating Expenses | FY 1996 | FY 1997 | FY 1998 | $ Change | % Change | FY 1999 |
|---|---|---|---|---|---|---|
| Capital Equipment (total) | $ 2,995 | $ 2,450 | $ 1,496 | $ (954) | (39%) | $ 1,496 |

DEPARTMENT OF ENERGY
FY 1998/FY 1999 CONGRESSIONAL BUDGET REQUEST
OTHER DEFENSE ACTIVITIES
(Tabular dollars in thousands, Narrative in whole dollars)

## SECURITY INVESTIGATIONS

PROGRAM MISSION

The Security Investigations Program funds background investigations for DOE and contractor personnel who, in the performance of their official duties, require access authorizations for Restricted Data, National Security Information, or special nuclear material.

The GOAL of the Security Investigations Program is to:

Support the common defense and security of the United States by ensuring that only appropriate personnel have access to classified information, special nuclear material, or occupy sensitive positions.

The OBJECTIVES related to these goals are:

1. Reduce the types and numbers of access authorizations consistent with DOE mission changes, the downsizing of the nuclear weapons complex, and other classified programs and activities.

2. Ensure the timely and efficient processing and adjudication of initial access authorization requests and reinvestigations.

3. Support development and implementation of an electronic network among DOE field offices, DOE contractors, the Office of Personnel Management (OPM) and other Federal agencies to reduce the overall access authorization processing time.

PERFORMANCE MEASURES:

1. Conduct approximately 18,800 personnel security investigations and reinvestigations.

2. Reduce the numbers and levels of access authorizations.

SIGNIFICANT ACCOMPLISHMENTS AND PROGRAM SHIFTS:

- While a major reinvestigations backlog was avoided in FY 1996 through the use of uncosted balances, funding shortfalls will create a new backlog of about 13,300 cases in FY 1997, accelerating in FY 1998 to approximately 25,200 cases.

- The number of access authorizations has been reduced by 28 percent in the past 5 years.

**SECURITY INVESTIGATIONS**

**PROGRAM FUNDING PROFILE**
(Dollars in thousands)

| Sub-program | FY 1996 Current Appropriation | FY 1997 Original Appropriation | FY 1997 Adjustments | FY 1997 Current Appropriation | FY 1998 Request | FY 1999 Request |
|---|---|---|---|---|---|---|
| Security Investigations | $ 20,000 | $ 20,000 | $ 0 | $ 20,000 | $ 20,000 | $ 20,000 |
| Subtotal, Security Investigations | $ 20,000 | $ 20,000 | $ 0 | $ 20,000 | $ 20,000 | $ 20,000 |
| Adjustment | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL, SECURITY INVESTIGATIONS | $ 20,000 a/ | $ 20,000 | $ 0 | $ 20,000 | $ 20,000 | $ 20,000 |

a/ Does not reflect the use of $15 million in prior-year uncosted balances and $2.3 million in unobligated carryover.

Public Law Authorizations:
Public Law 83-703, "Atomic Energy Act of 1954"

**SECURITY INVESTIGATIONS**
(Dollars in thousands)

PROGRAM FUNDING BY SITE

| Field Offices/Sites | FY 1996 Current Appropriation | FY 1997 Original Appropriation | FY 1997 Adjustments | FY 1997 Current Appropriation | FY 1998 Request | FY 1999 Request |
|---|---|---|---|---|---|---|
| Albuquerque Operations Office | $ 6,977 | $ 5,518 | $ 0 | $ 5,518 | $ 5,318 | $ 5,318 |
| Chicago Operations Office | 0 | 186 | 0 | 186 | 186 | 186 |
| Idaho Operations Office | 630 | 366 | 0 | 366 | 391 | 391 |
| Nevada Operations Office | 700 | 469 | 0 | 469 | 494 | 494 |
| Oak Ridge Operations Office | 0 | 1,831 | 0 | 1,831 | 1,831 | 1,831 |
| Oak Ridge Inst. of Sci. & Eng. | 385 | 385 | 0 | 385 | 250 | 250 |
| Pittsburgh Naval Reactors Office | 0 | 1,164 | 0 | 1,164 | 1,214 | 1,214 |
| Rocky Flats Office | 316 | 595 | 0 | 595 | 645 | 645 |
| Richland Operations Office | 880 | 487 | 0 | 487 | 487 | 487 |
| Oakland Operations Office | 1,502 | 2,275 | 0 | 2,275 | 2,275 | 2,275 |
| Lawrence Livermore National Lab. | 4,200 | 2,000 | 0 | 2,000 | 0 | 0 |
| Savannah River Operations Office | 2,507 | 1,392 | 0 | 1,392 | 1,392 | 1,392 |
| Schenectady Naval Reactors Office | 712 | 416 | 0 | 416 | 466 | 466 |
| Washington Headquarters | 1,191 | 2,916 | 0 | 2,916 | 5,051 | 5,051 |
| Subtotal | $ 20,000 | $ 20,000 | $ 0 | $ 20,000 | $ 20,000 | $ 20,000 |
| Adjustment | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | $ 20,000 a/ | $ 20,000 | $ 0 | $ 20,000 | $ 20,000 | $ 20,000 |

a/ Does not reflect the use of $15 million in prior-year uncosted balances and $2.3 million in unobligated carryover.

## SECURITY INVESTIGATIONS

(Tabular dollars in thousands, narrative in whole dollars)

I. **Mission Supporting Goals and Objectives:**

The Security Investigations Program funds background investigations for DOE and contractor personnel who, in the performance of their official duties, require access authorizations for Restricted Data, National Security Information, or special nuclear material.

II. **Funding Schedule:**

| Program Activitiy | FY 1996 | FY 1997 | FY 1998 | $ Change | % Change | FY 1999 |
|---|---|---|---|---|---|---|
| **Federal Bureau of Investigation** | | | | | | |
| **Background Investigations** | $ 49 | $ 49 | $ 49 | $ 0 | 0 | $ 49 |
| **Office of Personnel Management** | | | | | | |
| **Initial Background Investigations** | | | | | | |
| Single Scope Background | 5,993 | 6,750 | 6,750 | 0 | 0 | 6,750 |
| Initial Background | 74 | 116 | 116 | 0 | 0 | 116 |
| Limited Background | 601 | 598 | 1,035 | + 437 | + 73 | 1,035 |
| **Reinvestigations** | | | | | | |
| Periodic Reinvestigaton-SBI | 5,431 | 6,109 | 7,462 | + 1,353 | + 22 | 7,462 |
| Limited Background | 1,098 | 1,150 | 1,155 | + 5 | 0 | 1,155 |
| **National Agency Checks** | 699 | 773 | 773 | 0 | 0 | 773 |
| **Related Security** | | | | | | |
| **Investigations Activities** | 6,055 | 4,455 | 2,660 | - 1,795 | - 40 | 2,660 |
| Total, Security Investigations | $ 20,000 | $ 20,000 | $ 20,000 | $ 0 | 0 | $ 20,000 |

a/ Does not reflect the use of $15 million in prior-year uncosted balances and $2.3 million in unobligated carryover.

| III. Performance Summary: SECURITY INVESTIGATIONS | FY 1996 | FY 1997 | FY 1998 | FY 1999 |
|---|---|---|---|---|
| o Conduct up to 9 initial Federal Bureau of Investigation (FBI) background investigations and reimburse FBI for finger print card and name checks. | 49 | 49 | 49 | 49 |
| o Conducted approximately 27,746 personnel security investigations in FY 1996. Budget will support 17,600 investiations in FY 1997 and 18,839 cases in FY 1998. | | | | |
| - 2,300 initial personnel security clearance investigations conducted during FY 1996. Anticipate 1,797 cases to be conducted in FY 1997 and 1,987 in FY 1998. | 6,668 | 7,464 | 7,901 | 7,901 |
| - 13,515 reinvestigations were conducted in FY 1996. Approximately 5,217 cases will be completed in FY 1997 and 6,264 in FY 1998. | 6,529 | 7,259 | 8,617 | 8,617 |
| - 11,931 National Agency Checks (NAC's) were performed in FY 1996. Plan to support 10,586 NAC's in FY 1997 and 10,588 in FY 1998. | 699 | 773 | 773 | 773 |
| o Continue to reduce the numbers and levels of clearances in excess of those necessary to support the current DOE mission. | | | | |
| o Use of over $17 million in prior-year funds avoided a major backlog of initial investigations and reinvestigations in FY 1996. During FY 1997 the backlog is expected to reach 13,300 cases, increasing to approximately 25,200 cases by the end of FY 1998. | | | | |

| III. Performance Summary: SECURITY INVESTIGATIONS | FY 1996 | FY 1997 | FY 1998 | FY 1998 |
|---|---|---|---|---|
| o Related Security Investigation Activities: | | | | |
| - Increased efforts were made during FY 1996 to complete the Electronic Transfer Program, which is expected to be operational throughout DOE by the end of FY 1997. Continue development of modernized DOE Integrated Safeguards and Security (DISS) personnel security data bases in conjunction with the electronic clearance process. Funding in FY 1998 and beyond is required to maintain, coordinate, and manage the Electronic Transfer Program and DISS at Headquarters. | 4,720 | 3,120 | 2,000 | 2,000 |
| - Continue to support Accelerated Access Authorization Program (AAAP). | 600 | 600 | 400 | 400 |
| - Provide support for miscellaneous costs involved in maintaining a viable personnel security program. | 735 | 735 | 260 | 260 |
| **TOTAL Security Investigations** | $20,000 | $20,000 | $20,000 | $20,000 |

## SECURITY INVESTIGATIONS

EXPLANATION OF FUNDING CHANGES FROM FY 1997 TO FY 1998:

| | |
|---|---|
| o Support for Related Security Investigations Activities reduced as development of Electronic Transfer Program is expected to be complete. | - $1,795 |
| o Approximately 1,200 additional investigations will be conducted. | + $1,795 |
| Total Funding Change, Security Investigations | $0 |

MAJOR ISSUES:

o OPM privatization has potential consequences for the Department in terms of cost, efficiency, and effectiveness.

o No uncosted balances remain to supplement FY 1997 and FY 1998 funding. As a result, a serious backlog of initial investigations and reinvestigations will develop.

- Field offices report that significant operational impacts will result from the scheduled funding reductions.

**DEPARTMENT OF ENERGY**
**FY 1998/99 CONGRESSIONAL BUDGET REQUEST**
**OTHER DEFENSE ACTIVITIES**
**(Tabular dollars in thousands, Narrative in whole dollars)**

## EMERGENCY MANAGEMENT

## PROGRAM MISSION

The Office of Emergency Management serves as the point of contact and control for all Departmental emergency management and threat assessment related activities and ensures an integrated response to emergencies affecting Departmental operations and activities or requiring Departmental assistance. The principal mission of the Office is to provide comprehensive, integrated emergency planning, preparedness, and response programs throughout the Department and to provide threat assessment support to the Department's Headquarter and field operations. The Office operates the Headquarters Emergency Operations Center, Communications Center and the Department emergency communications network; develops and operates reliable capabilities to detect and assess developing emergency situations and threats; provides rapid credibility assessment of nuclear, chemical and biological threats and potential smuggling activities; and issues all policy and guidance for the Department's emergency programs. This program also operates the HAZMAT Spill Center, which supports the formulation of emergency management policy for hazardous materials and conducts research in partnership with government and industry.

The GOAL of the Emergency Management Program is to:

Support the National Security of the United States by ensuring an integrated Departmental response to all emergencies and assessing the credibility of threats and smuggling activities.

The OBJECTIVES related to this goal are:

1. Maintain national security and ensure protection of workers, the public, and environment.

2. Execute an integrated Departmental program in support of other U.S. Government agencies for combating terrorism and supporting crisis and consequence management to any terrorist act.

3. Maintain the capability to provide technical advice and assistance to Departmental elements for cost effective implementation of emergency management programs.

4. Develop, maintain, and promulgate policy; planning and preparedness guidance; and readiness assurance activities.

**PROGRAM MISSION - EMERGENCY MANAGEMENT** (Cont'd)

5. Assess threats to DOE personnel, operations and facilities from foreign and domestic adversaries and provide timely reports.

6. Assess the credibility of nuclear, chemical and biological threats received worldwide as well as support efforts for the prevention of illicit nuclear, chemical and biological materials trafficking.

7. Operate and maintain the Headquarters Emergency Operations Center, Communications Center and the Department’s emergency communications network.

8. Provide program management for operations of the HAZMAT Spill Center program.

9. Maintain emergency programs to minimize adverse impacts of energy supply disruptions on national security, public safety and the energy infrastructure.

10. Assess the vulnerabilities of the Nation's energy supply systems.

11. Promote the Department's emergency policy interests in international fora.

12. Support deployment and operational capabilities of nuclear, chemical and biological dispersal models for emergency planning, preparedness and response.

PERFORMANCE MEASURES:

1. Conduct twelve (12) emergency management system training and technical assistance workshops.

2. Conduct three (3) technical threat awareness training courses.

3. Conduct six (6) emergency management system technical assistance visits/appraisals.

4. Support/conduct six (6) Department-wide drills and exercises.

5. Conduct forty two (42) weeks of testing at the HAZMAT Spill Center.

6. Provide situation assessments within one (1) hour after identification of a potential emergency.

7. Conduct emergency assessment conferences for Federal, state, tribal and industry groups.

8. Support the increased role and visibility of the Department as a leader in the formulation of National Security related policies for combating terrorism and nuclear, chemical, and biological materials trafficking.

9. Conduct thirty (30) threat assessments.

SIGNIFICANT ACCOMPLISHMENTS AND PROGRAM SHIFTS:

- Conducted additional emergency management system appraisals, training and assistance workshops, and Department-wide drills and exercises.

- Improved operation of DOE's emergency management system and emergency facilities through technical assistance.

- Increased customer involvement in planning, preparedness, and readiness assurance activities.

- Improved collaborative efforts with Federal, state, tribal and industry entities to prepare for and respond to emergencies.

- Provided situation reports and assessments for developing emergencies.

- Provided an annual report on illicit nuclear, chemical, and biological material transactions.

- Improved support to other U.S. Government agencies in combating nuclear terrorism and crisis and consequence management to any terrorist act.

- Continued leadership role of the Department in the formulation of national security related policies for nuclear, chemical, and biological materials trafficking.

- Provided assessments of threats to DOE facilities and interests and collaborated with the FBI’s National Center for the Analysis of Violent Crime for joint information and data sharing.

- Provided training to Counter Terrorism Community on national security activities involving weapons of mass destruction.

- Provide rapid credibility assessment of any threats made involving weapons of mass destruction and devices or materials, and supported rapid credibility assessment of potential nuclear, chemical, and biological weapons or materials smuggling activities.

- Conduct Threat Awareness seminars for DOE, industry, law enforcement, and Intelligence Community.

- Continue architecture studies/analyses to support preplanned response to chemical and biological threats.

SIGNIFICANT ACCOMPLISHMENTS AND PROGRAM SHIFTS CONT'D:

- Provide, through the Atmospheric Release Advisory Capability Program, plume modeling and dispersion for chemical and biological releases to the atmosphere.

- Built upon and leverage extensive DOE capabilities and assets to ensure effective emergency response to counter terrorism.

- Expand the Headquarters emergency operations center voice, data, and video connection to include additional DOE sites, National Laboratories, Public Health Service, FBI Headquarters, Centers for Disease Control, and other Federal agencies.

EMERGENCY MANAGEMENT
PROGRAM FUNDING PROFILE
(Dollars in Thousands)

| Sub-program | FY 1996 Current Appro. | FY 1997 Original Appro. | FY 1997 Adjustments | FY 1997 Current Appro. | FY 1998 Budget Request | FY 1999 Request |
|---|---|---|---|---|---|---|
| Emergency Management Operating Expenses | $ 23,321 | $ 16,794 | $0 | $ 16,794 | $ 27,700 1/ | $ 27,700 |
| TOTAL, Emergency Management | $ 23,321 | $ 16,794 | $0 | $ 16,794 | $ 27,700 1/ | $ 27,700 |

1/ Includes Threat Assessment funding formerly in Intelligence ($3.3M), the Communications Center funding formerly in Human Resources and Administration ($1.1M) and $6.5M for new initiatives for an enhanced threat assessment capability, training in nuclear smuggling activities, and chemical a and biological counterterrorism.

EMERGENCY MANAGEMENT
PROGRAM FUNDING BY SITE
(Dollars in Thousands)

| Laboratory and Facility Funding | FY 1996 Current Appro. | FY 1997 Original Appro. | FY 1997 Adjustments | FY 1997 Current Appro. | FY 1998 Budget Request | | FY 1999 Request |
|---|---|---|---|---|---|---|---|
| Chicago Operations Office | | | | | | | |
| Argonne National Lab (East) | $ - | $ - | $ - | $ - | $ 200 | | $ 200 |
| Brookhaven National Lab | $ 300 | $ 300 | $ 300 | $ 300 | $ 300 | | $ 300 |
| Oakland Operations Office | | | | | | | |
| Lawrence Livermore National Lab | $ 800 | $ 800 | $ 800 | $ 800 | $ 8,000 | 1/ | $ 8,000 |
| Idaho Operations Office | | | | | | | |
| Idaho National Engineering Lab | $ 200 | $ 200 | $ 200 | $ 200 | $ 150 | | $ 150 |
| Albuquerque Operations Office | | | | | | | |
| Los Alamos National Lab | $ 100 | $ 100 | $ 100 | $ 100 | $ 300 | | $ 300 |
| Sandia National Labs | $ 200 | $ 200 | $ 200 | $ 200 | $ 400 | | $ 400 |
| Nevada Operations Office | $ 6,500 | $ 6,500 | $ 6,500 | $ 6,500 | $ 8,100 | 1/ | $ 8,100 |
| Richland Operations Office | | | | | | | |
| Pacific Northwest Lab | $ 200 | $ 200 | $ 200 | $ 200 | $ 300 | | $ 300 |
| Oak Ridge Operations Office | $ 1,800 | $ 1,800 | $ 1,800 | $ 1,800 | $ 1,800 | | $ 1,800 |
| Washington Headquarters | $ 13,221 | $ 6,694 | $ 6,694 | $ 6,694 | $ 8,150 | 2/ | $ 8,150 |
| Subtotal | $ 23,321 | $ 16,794 | $ 16,794 | $ 16,794 | $ 27,700 | | $ 27,700 |
| Adjustment | $ - | $ - | $ - | $ - | $ - | | $ - |
| TOTAL | $ 23,321 | $ 16,794 | $ 16,794 | $ 16,794 | $ 27,700 | | $ 27,700 |

1/ Includes Threat Assessment funding formerly in Intelligence ($3.3M) and $6.5M for new initiatives for an enhanced threat assessment capability, training in nuclear smuggling activities, and chemical and biological counterterrorism.

2/ Includes the Communications Center funding formerly in Human Resources and Administration ($1.1M).

**EMERGENCY MANAGEMENT**
**(Dollars in Thousands)**

I. Mission Supporting Goals and Objectives

The Office develops and implements specific programs, plans and systems to minimize the impact of emergencies on national security, worker and public safety, and the environment. The Office provides overall coordination or consultation regarding the Department's Emergency Management System, including emergency assistance and mobilization activities, energy emergencies, and activities related to emergencies involving hazardous materials (radiological and non-radiological). The Office promulgates Departmental requirements and implementing guidance, and conducts readiness assurance activities to ensure appropriateness and effectiveness. The Office also coordinates inter-agency and intra-Departmental emergency planning, preparedness and exercises, as well as coordinating with state and local governments, international agencies, foreign governments, and industry on emergency planning, preparedness and exercise issues.

Another mission area is to identify and assess hostile threats to Departmental facilities, interests and personnel, assess the credibility of nuclear, chemical, and biological threats received world-wide, and support U.S. Government and allied nations efforts for the prevention of illicit nuclear, chemical, and biological materials trafficking worldwide. The Office operates and maintains Headquarters 24-hour per day emergency operations facilities and communications center for the collection and processing of information relative to emergency notifications and reporting and support of emergency management activities at the Headquarters level and implements a security program for the protection of Office information, equipment, and facilities.

To effectively implement its mission, the Office develops and maintains capabilities to effectively and efficiently integrate and coordinate Departmental response to all emergencies. The Office provides liaison and coordination regarding operational emergency response activities, and monitor potential disruptions to national and international energy supply and distribution networks and infrastructures, providing appropriate situation reports and assessments as part of a coordinated Departmental emergency or pre-emergency response. Additionally, the HAZMAT Spill Center provides the DOE community, other governmental agencies, and private sector customers with a unique training, testing, and technical center for hazardous materials research relating to emergency management.

The Department's Headquarter Emergency Operations Center, 24-hour per day Operations Center Watch Office function, Communications Center and emergency communication network are supported by a support service contract. The FY 98 planning level for this support is $2.3 million.

These activities are in support of the Atomic Energy Act of 1954, as amended, Presidential Decision Directive 39, Executive Orders 12656 and 12919, the Defense Production Act of 1950 as amended, Presidential Review Directive 47, and environment related regulations including the Resource Conservation and Recovery Act, Superfund Amendments and Reauthorization Act of 1986, Conservation Environmental Response Compensation and Liability Act, and Clean Air Act Amendments of 1990.

II. Funding Schedule:

| Program Activity | FY 1996 | FY 1997 | FY 1998 | $ Change | FY 1999 |
|---|---|---|---|---|---|
| Emergency Management | $17,721 | $11,394 | [1/] $22,200 | $0 | $25,000 |
| HAZMAT Spill Center (Formerly Liquified Gaseous Fuels Spill Test Facility) | 1,600 | 1,600 | 1,600 | 0 | 1,600 |
| Emergency Operations Support Service Contract | 2,500 | 2,300 | 2,300 | 0 | 2,500 |
| Capital Equipment | 1,500 | 1,500 | 1,600 | 0 | 1,600 |
| Total, Emergency Management | $23,321 | $16,794 | [1/] $27,700 | $0 | $27,700 |

1/ Includes Threat Assessment funding formerly in Intelligence ($3.3M), the Communications Center funding formerly in Human Resources and Administration ($1.1M), and $6.5M for new initiatives for an enhanced threat assessment capability, training in nuclear smuggling activities, and chemical and biological counterterrorism.

III. Performance Summary-Accomplishments

| | FY96 | FY97 | FY98 | FY99 |
|---|---|---|---|---|
| - Expand nation-wide voice, data, and video link-up of DOE Operations Offices and select National Laboratory emergency operation centers to include additional laboratories, DOE sites, and selected Federal agencies. Operate the 24-hour Watch Office and Communications Center. | 6,000 | 6,000 | [2/] 7,100 | [2/] 7,300 | |
| - Conduct planing, training and readiness assurance activities to ensure effective implementation of the Department's emergency management system. Provide emergency management, assessment, and threat awareness training, and assistance workshops to Departmental elements, Federal, state, local, and tribal governments. | | 2,000 | 2,000 | [1/] 2,400 | [1/] 3,000 |

| Performance Summary-Accomplishments Cont'd | FY96 | FY97 | FY98 | FY99 |
|---|---|---|---|---|
| - Conduct technical assistance visits to assist Departmental elements in determining program weaknesses and cost effective means for making improvements. | 300 | 300 | 300 | |
| - Evaluate tests and exercises of Departmental programs to demonstrate effective emergency response. | 1,500 | 1,500 | 1,500 | 1,500 |
| - Continue to provide independent evaluations and generate after-action reports with findings and recommendations for all emergency situations and exercises involving Office of Emergency Management staff and ensure follow-up of appropriate corrective actions to enhance the emergency management system. | 300 | 300 | [4/] 350 | [4/] 350 |
| - Respond to natural and man-made disasters as they occur to provide damage assessments and technical assistance to state and local governments and industry in restoration of essential energy services and consequence management. | 900 | 894 | 900 | 1,000 |
| - Assist states in developing and maintaining all-hazards emergency plans. | 200 | 200 | 200 | 300 |
| - Augment the communicated threat assessment program to provide a national capability to assess the credibility of radiological, chemical and biological threats in addition to extortion threats. | -- | -- | [1/3/4/] 5,400 | [1/3/4/] 6,000 |
| - Deliver new emergency management system training and technical assistance workshops developed to meet specific user needs both domestically and internationally. | 1,066 | 1,000 | [1/3/4/] 1,400 | [1/3/4/] 1,600 |
| - Provide support to increase the role and visibility of the Department as a leader in the formulation of national security related policies for nuclear materials trafficking. | -- | -- | [3/] 500 | [3/] 800 |
| - Publish Nuclear Terms Handbook to strengthen the capabilities of National Security Community through improved understanding of the terminology associated with nuclear weapons and devices. | 100 | 100 | 100 | 100 |

| Performance Summary-Accomplishments Cont'd | FY96 | FY97 | FY98 | FY99 |
|---|---|---|---|---|
| - In support of U.S. Government agencies, maintain data on the flow and composition of nuclear smuggling focusing on the quality of smuggled material, the source of the material, and the intended use of the smuggled material. | 300 | 300 | [3/] 500 | [3/] 700 |
| - Initiate a program in support of interagency and Departmental exercises to ensure adequate and comprehensive response to counter terrorism. | 200 | 200 | [3/4/] 1,500 | [3/4/] 1,700 |
| - Strengthen and expand the Department's support for crisis and consequence management in combating terrorism and nuclear, chemical, and biological material trafficking, with increased emphasis on the chemical and biological arenas. Continue support to U.S. organizations and activities aimed at combating terrorism. | 1,000 | 1,000 | [4/] 1,950 | [4/] 2,250 |
| - Expand and integrate the Atmospheric Release Advisory Capability (ARAC) plume modeling for chemical, biological, and hazardous materials releases. | 600 | 600 | [4/] 1,200 | [4/] 1,400 |
| - Continue user-sponsored spill tests for both government and industry at the HAZMAT Spill Center; provide spill test results to Departmental elements, other government agencies, industry and the general public for use in hazards mitigation and emergency responder training programs. | 1,600 | 1,600 | 1,600 | 1,600 |
| - Prepare situation reports on emergencies and energy problems for senior Departmental officials. | 300 | 300 | 300 | 300 |
| - Strengthen support to U.S. and international efforts aimed at improvising emergency response programs world-wide. | 500 | 500 | 500 | 600 |
| Total Emergency Management | $16,866 | $16,794 | $27,700 | $27,700 |

1/ Includes Threat Assessment funding.

2/ Includes Communications Center funding.

3/ Includes additional funding for nuclear smuggling activities.

4/ Includes additional funding for chemical and biological conterterrorism.

## EMERGENCY MANAGEMENT

## FACILITIES OPERATIONS
**(Dollars in Thousands)**

I. Mission Supporting Goals and Objectives:

Continue to procure and test new equipment throughout DOE Emergency Operations Centers and in support of the Communicated Threat Assessment Program. Facility operations funds capital equipment to support the emergency management mission.

II. Funding Schedule:

| Program Activity | FY 1996 | FY 1997 | FY 1998/99 | $ Change |
|---|---|---|---|---|
| Capital Equipment | $1,500 | $1,500 | [1/] $1,600 | $0 |
| Total, Facilities Operations | $1,500 | $1,500 | [1/] $1,600 | $0 |

III. Performance Summary:

Included above.

1/ Includes Threat Assessment funding formerly in Intelligence.

## EMERGENCY MANAGEMENT

### SIGNIFICANT FUNDING CHANGES FROM FY 1997 TO FY 1998

**Chemical/Biological Terrorism**: (+4,000) Presidential Decision Directive 39 (US Policy on Counterterrorism) mandates a national effort to reduce the danger and associated potential for chemical and biological terrorism. This program supports and complements activities in other agencies/organizations (e.g., FEMA, FBI, EPA, Customs, etc.) in prevention/deterrence, detection, response, neutralization and decontamination related to domestic threats involving weapons of mass destruction. The program builds upon and leverages extensive DOE capabilities and assets in emergency management and response. Without these additional funds, vulnerability to and consequences of a terrorist event involving a weapon of mass destruction would increase. The benefit of this increase in the program is to enhance the US capability to prevent, respond, and if necessary, mitigate domestic expertise and capabilities.

**Nuclear Smuggling**: (+2,500) Presidential Decision Directives 39 (US Policy on Counterterrorism) and 41 (MPC&A) and Nuclear Smuggling) mandate a national effort to reduce the danger of nuclear smuggling and the associated potential for nuclear terrorism. Additional funding will be used to expand the Communicated Threat Assessment program to provide an enhanced national capability to assess illicit trafficking in nuclear materials. Additional funding will be used to expand the Communicated Threat Assessment to provide an enhanced national capability to assess illicit trafficking in the nuclear materials. New funding will be used to analyze, monitor, track, and record all illicit nuclear materials trafficking incidents. Funds will also support illicit material trafficking training programs, both domestically and internationally, to ensure that first responders and the law enforcement community receive appropriate training in recognizing and countering illicit nuclear material trafficking. In addition, funding will support interagency and Departmental exercises to ensure adequate and comprehensive response programs to counter nuclear material trafficking and terrorism are in place and to promote synergism among the various Federal agencies and the international community responsible for responding to such situations.

**Threat Assessment**: (+3,306) Funding associated with the Office of Emergency Management's Threat Assessment program is realigned. The funding has been moved to the Office of Emergency Management from the Office of Energy Intelligence.

**Communications Center**: (+1,100) Funding associated with the Communications Center is realigned to the Office of Emergency Management. The funding has been moved to the Office of Emergency Management from Human Resources and Administration.

EMERGENCY MANAGEMENT
CAPITAL OPERATING EXPENSES AND CONSTRUCTION SUMMARY
(Dollars in Thousands)

| Capital Operating Expenses | FY 1996 | FY 1997 | FY 1998 | $CHANGE | FY 1999 |
|---|---|---|---|---|---|
| Facilities Operations | $ 1,500 | $ 1,500 | $ 1,600 1/ | $0 | $ 1,600 |
| TOTAL, Emergency Management | $ 1,500 | $ 1,500 | $ 1,600 1/ | $0 | $ 1,600 |

1/ Includes Threat Assessment funding formerly in Intelligence ($3.3M), the Communications Center funding formerly in Human Resources and Administration ($1.1M) and $6.5M for new initiatives for an enhanced threat assessment capability, training in nuclear smuggling activities, and chemical and and biological counterterrorism.

DEPARTMENT OF ENERGY
FY 1998/FY 1999 CONGRESSIONAL BUDGET REQUEST
OTHER DEFENSE ACTIVITIES
(Tabular dollars in thousands, Narrative in whole dollars)

NONPROLIFERATION AND NATIONAL SECURITY PROGRAM DIRECTION

I. Mission Supporting Goals/Ongoing Responsibilities:

The Nonproliferation and National Security (NN) program direction budget provides for all Federal personnel required at DOE Headquarters, and two field offices to carry out the program's mission in a cost effective and efficient manner. It provides salaries and benefits, travel, support service contracts, and other related expenses associated with the overall management, direction, and administration of the following programs:

Verification and Control Technology
- Nonproliferation and Verification Research and Development
- Arms Control and Nonproliferation
- Intelligence

Nuclear Safeguards and Security
Security Investigations
Emergency Management

Travel funds that are required to carry out program mission while away from official duty stations, per diem allowances as well as local travel are carried in this decision unit. Travel is an essential part of staff duties in order to conduct hands-on operations both domestically and internationally, participate in highly technical agency and interagency committees, and to ensure appropriate Government representation in policy meetings.

Support services contracts funding is included in this decision unit. These contracts support Federal staff at Headquarters and in the field. These contracts provide technical, analytical, administrative, and operational support in multiple program areas such as safeguards and security, declassification and classification; intelligence activities; emergency management; threat assessment; research and development, and arms control. The daily operation and associated technical direction of the contracts remain with Federal program managers in each organization.

"Other Related Expenses" include the working capital fund (space, utilities, general printing, graphics, copying, supplies, telephones, etc.) general office automation support, operation and maintenance of equipment, and other miscellaneous services.

II. Funding Table:

FY 1998/FY 1999 CONGRESSIONAL BUDGET REQUEST
OTHER DEFENSE ACTIVITIES
(Tabular dollars in thousands, Narrative in whole dollars)

| | FY 1996 Approp. | FY 1997 Original Approp. | FY 1997 Adjustments | FY 1997 Current Approp. | FY 1998 Budget Request |
|---|---|---|---|---|---|
| Chicago | | | | | |
| Salary and Benefits | 0 | 3,571 | 0 | 3,571 | 3,849 |
| Travel | 0 | 185 | 0 | 185 | 185 |
| Support Services | 0 | 0 | 0 | 0 | 0 |
| Other Related Expenses | 0 | 1,549 | 0 | 1,549 | 1,551 |
| Total | $ 0 | $5,305 | 0 | $5,305 | 5,585 |
| Full Time Equivalents | | 62 | | 62 | 62 |
| Nevada | | | | | |
| Salary and Benefits | 0 | 568 | 0 | 568 | 690 |
| Travel | 0 | 56 | 0 | 56 | 56 |
| Support Services | 0 | 525 | 0 | 525 | 525 |
| Other Related Expenses | 0 | 4 | 0 | 4 | 4 |
| Total | $ 0 | $ 1,153 | 0 | $1,153 | $1,275 |
| Full Time Equivalents | | 8 | | 8 | 8 |

II. Funding Table: (continued)

CONGRESSIONAL BUDGET REQUEST
OTHER DEFENSE ACTIVITIES
(Tabular dollars in thousands, Narrative in whole dollars)

| | FY 1996 Approp. | FY 1997 Original Approp. | FY 1997 Adjustments | FY 1997 Current Approp. | FY 1998 Budget Request |
|---|---|---|---|---|---|
| Headquarters | | | | | |
| Salary and Benefits | 0 | 37,671 | 0 | 37,671 | 37,271 |
| Travel | 0 | 2,459 | 0 | 2,459 | 2,459 |
| Support Services | 0 | 27,249 | 0 | 27,249 | 32,802 |
| Other Related Expenses | 0 | 14,285 | 0 | 14,285 | 15,508 |
| Total | $ 0 | $ 81,664 | | 81,664 | $88,040 |
| Full Time Equivalents | | 345 | | 345 | 340 |
| Total Nonproliferation and National Security | | | | | |
| Salary and Benefits | 0 | 41,810 | 0 | 41,810 | 41,810 |
| Travel | 0 | 2,700 | 0 | 2,700 | 2,700 |
| Support Services | 0 | 27,774 | 0 | 27,774 | 33,327 |
| Other Related Expenses | 0 | 15,838 | 0 | 15,838 | 17,063 |
| Total | $ 0 | $ 88,122 | 0 | $ 88,122 | $94,900 |
| Full Time Equivalents | | 415 | | 415 | 410 |

III. Performance Summary:

| | FY 1996 | FY 1997 | FY 1998 | FY 1999 |
|---|---|---|---|---|
| Salaries and Benefits provides for NN Federal personnel compensation including overtime, awards, lump sum leave payments, transit subsidy, contributions to employees benefits, and associated escalation. | | | | |
| NN Headquarters..... | 0 | 35,831 | 37,271 | 37,271 |
| NN Field..... | | 4,139 | 4,539 | 4,539 |
| The Office of Hearings and Appeals salaries, and benefits were carried in this decision unit in FY 1997. The Department has realigned FY 1998 Hearings and Appeals activities into a separate decision unit . | | | | |
| Hearings and Appeals (Headquarters)..... | 0 | 1,840 | 0 | 0 |
| Headquarters federal staffing is driven by specific functional responsibilities as well as management and direction requirements. NN is the focal point within the Department for activities that support the President's nonproliferation policy, goals and objectives and activities which assist other Departmental and field elements achieve their missions. Staff directs and manages multiple technology and research and development tasks. NN staff serves as the Headquarters operational element for activities such as emergency management, security; declassification and classification operations; and energy intelligence direct support to policy officials. It develops department wide policy and plans for national security programs such as safeguards and security, declassification and classification. NN is directly responsible for management of the New Brunswick National Laboratory, the Central Training Academy in Albuquerque, New Mexico, and the HAZMAT Spills Test Facility at the Nevada Test Site. | | | | |
| Total salaries and benefits..... | 0 | 41,810 | 41,810 | 41,810 |

| | FY 1996 | FY 1997 | FY 1998 | FY 1999 |
|---|---|---|---|---|
| Travel includes domestic and foreign trips necessary to conduct non-proliferation and national security business. International travel is necessary due to the continous work with Former Soviet Union republics. Domestic travel includes national security assistance and interface with field offices, laboratories and local governments. Nonproliferation issues and program interface also require domestic travel..... | 0 | 2,700 | 2,700 | 2,700 |
| Support Services provide an invaluable resource of highly specialized and analytical expertise required to meet critical nonproliferation and national security issues. NN programs use contractor services to support declassification objectives while ensuring that national security is not jeopardized through inadvertent release of classified nuclear related design information; ensure implementation of cost-saving safeguards and security measures, provide techncial, analytical and support expertise essential to a balanced safeguards and security program capable of addressing technology advancements and the dynamic changing environment associated with weapons returns, arms control, and nonproliferation; ensure that NN can meet the objectives of the materials protection, control and accounting programs; provide technical assistance appraisals, emergency response tests and exercises, counter terrorism expertise and readiness assurance activities; technical support to the Counterintelligence and Special Technologies program; technical analyses and support of future proliferation detection and treaty verification; and review and assessment of technology and program status. A detailed description of support services is included on the “Support Services” schedule..... .. ..... | 0 | 27,774 | 33,327 | 33,327 |
| Other related expenses include Headquarters space, utilities, general printing, graphics, copying, supplies, telephones, general automation support, payroll outsourcing, postage, and other miscellaneous expenses associated with office operations. Similar support is provided to the Federally staffed New Brunswick Laboratory. | 0 | 15,838 | 17,063 | 17,063 |
| TOTAL PROGRAM DIRECTION | 0 | 88,122 | 94,900 | 94,900 |

IV. Explanation of Funding Changes from FY 1997 to FY 1998:

| | |
|---|---|
| Increase is $5,553,000 in Support Services Contracts. This increase will provide continued support for declassification, classification, safeguards and security, arms control, verification research and development and energy intelligence programs. Continued erosion of support services contracts will seriously affect NN's ability to carry out its ongoing programs as well as meet the declassification program's Executive Order requirements. | $5,553,000 |
| Other related expenses increase. | $1,225,000 |

Increase is $1,225,000 for Working Capital Fund, $1,085,000 of the increase is identified for Building Occupancy. NN organizations for several years have endured overcrowded, unproductive and, in some instances, unsafe work environments. Departmental Administration has approved additional office space at the Germantown and Forrestal facilities.